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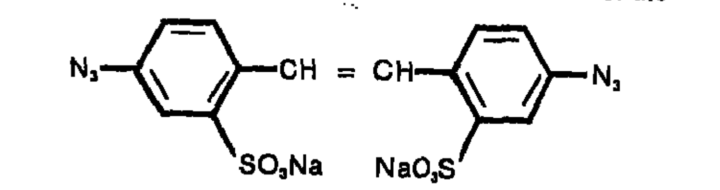

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CMR MARKET INDEX

CHEMICAL MARKETING REPORTER's market index of chemicals and related materials (100=1974 average), based on 97 key commercial chemicals, appears alongside with data for two weeks ago, last month and last year.

Nov. 21, 1986	151.76
Nov. 7, 1986	152.33
Oct. 24, 1986	151.77
Nov. 22, 1985	152.90

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CHEMICAL MARKETING CUES

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FRASCH SULFUR: Producers cut the Tampa price by $5 ....
EPOXY RESINS: Price increase appears to be ... two producers say ....
BENZYL ACETATE: Imports rise, prices and ... fall ....

Chemical Marketing Reporter

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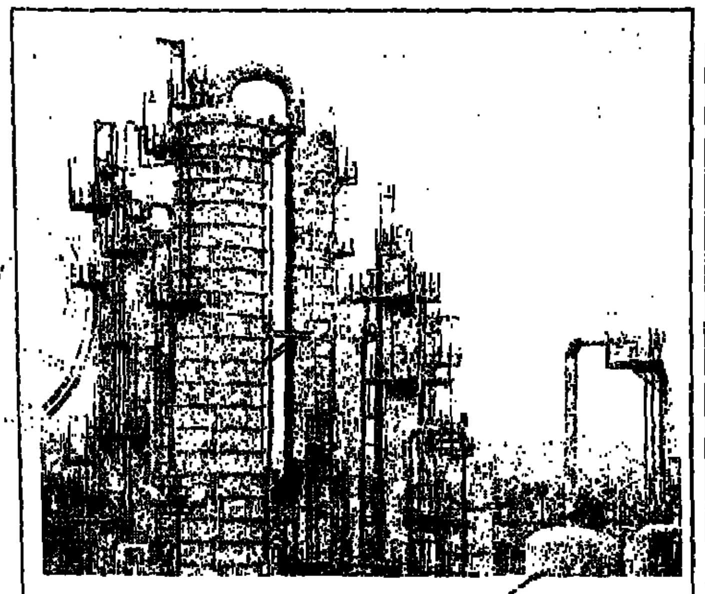

Phenol Problem 3

NEWSPAPER SECOND CLASS ENTRY DECEMBER 1, 1986 $2.50 per copy

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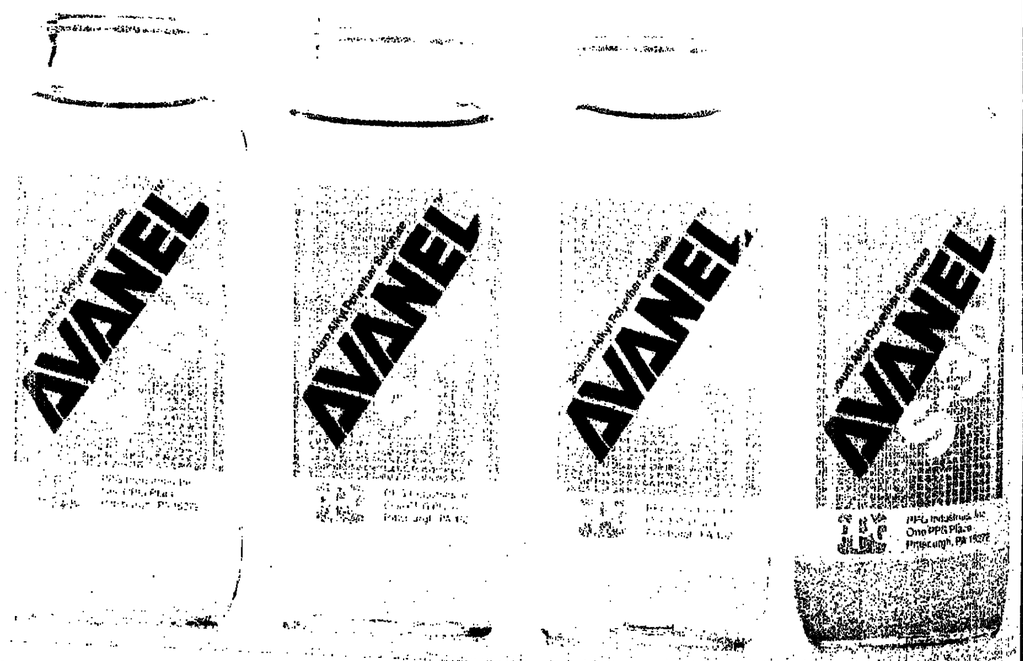

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Methylene Chloride Safety Queried

Although methylene chloride does not pose a sufficient risk to workers to require an emergency temporary standard, available data on the chemical may warrant a reduction in the current workplace exposure limit, the Federal government said last week.

Assistant Secretary of Labor John A. Pendergrass, who heads the department's Occupational Safety & Health Administration, issued an advance notice of proposed rulemaking which seeks public comment on possible changes to the agency's existing standard.

Laboratory studies have shown that methylene chloride, a widely used industrial solvent and fire retardant, can cause cancer among rats and mice.

"Available information provides evidence of its cancer causing effect on two animal species," Mr. Pendergrass said, "and therefore, the existing standard may be inadequate. Even though the data on the carcinogenic effect on people are still inconclusive, we want to review our existing standard and be prepared, if necessary, to make appropriate changes."

The current OSHA standard, which sets permissible worker exposure at 500 parts of methylene chloride per million parts of air (500 ppm) averaged over eight hours, was linked to the chemical's anesthetic and irritating properties and was not based on more recently documented acute effects, potential carcinogenicity or mutagenicity.

Methylene chloride, also known as dichloromethane and commonly referred to as DCM, is a volatile solvent of low flammability and an aerosol propellant widely

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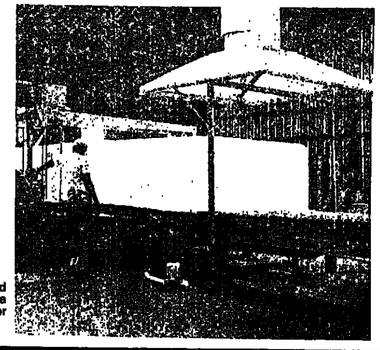

METHYLENE CHLORIDE in the workplace. Here it's being used as an auxiliary blowing agent to produce this slabstock foam at a Dow Chemical facility. The foam has been placed on a conveyor for cutting to customer specifications.

Bhopal District Court Lifts Injunction On UCC Dividend

The district court in Bhopal, India, lifted a temporary injunction last Wednesday (Nov. 26) that barred Union Carbide Corporation from paying its regular quarterly dividend of $0.375 per share, payable on December 1 to stockholders of record on November 7.

Hearings continued last week on other provisions of the interim injuction issued by the court last month in response to a bid by the Indian government to block Carbide from pursuing its recapitalization and asset divestment program.

Among other things, the government is trying to block Carbide's plan to retire some $2.5 billion in debt accumulated during its fight against GAF Corporation's takeover attempt earlier this year.

Lawyers representing the Indian government contend that Carbide is placing the interests of its creditors ahead of the rights of victims of the Bhopal gas leak.

Late last week Carbide offered to maintain $1 billion in unencumbered assets to cover any judgments, provided the court lift the injunction.

At the hearings in Bhopal last week, Carbide agrued that Indian civil law prohibits restraint on use of property outside India.

Under Indian law, Carbide argued, plaintiffs cannot prevent a defendant's use of his property so long as it is used so in a way that does not defraud creditors. Carbide said the Indian government "knows full well" that the company's recapitalization program is designed to strengthen the company's financial position and not to defraud creditors.

The hearings capped a week during which the Indian government revealed that it would seek at least $3 billion from the Danbury, Conn.-based firm, an amount way beyond the $600 million previously sought. Carbide had earlier offerred to settle the suit for $350 million, a figure the government dismissed as inadequate.

Also last week, Carbide charged in a Federal appeals court in New York that the Indian government has been tampering with the company's mail and telephones. The Indian government's lawyers denied the allegations.

At the hearing in the appeals court, Carbide also argued that the Indian government should be subject to the same pre-trial discovery requirements that Carbide agreed to be bound by, saying that it would be unfair to hold the company to a different standard. The company also sought a reaffirmation of a district court's requirement that the Indian government follow due process in the Bhopal litigation.

US District Court Judge John F. Keenan ruled in May that the Bhopal litigation should be heard in India, rather than in the US, but stipulated that certain conditions had to be met, among them, that Carbide alone abide by US-style discovery rules. It was this condition that Carbide was appealing in the appeals court.

Mobil Polystyrene Plant Slated For A Debottlenecking Project

Mobil Chemical Company is expanding its Joliet, Ill., polystyrene plant by 60 million pounds a year to meet increased customer demand for its high-impact resins, the company said last week.

The debottlenecking project is expected to be completed by the second quarter of 1988, boosting the plant's production capabilities to 360 million pounds, according to Mobil.

The company says its total polystyrene capacity currently stands at 440 million pounds, but industry sources say that figure is inflated, and is actually around 375 million pounds annually.

In addition to Joliet, Mobil produces polystyrene at plants in Santa Ana, Calif., and Holyoke, Mass.

"Mobil has substantially accelerated its R&D programs for high-impact polystyrene in recent years to create higher performance resins," Mobil commented last week. "These efforts are now paying off as these new premium resins replace more expensive resins in many applications."

Announcement of the Mobil debottlenecking project comes at a time when the polystyrene industry is operating at or near capacity. "It has been an excellent year for polystyrene," observes a mid-sized producer of the material. "I think everyone is running tight."

Strong demand for polystyrene and high operating rates have helped move pricing back up toward acceptable levels. Most firms have announced another round of price increases, to take effect by the first of the year.

Acceptance of the latest 3-cent increase would bring industry profit margins close to acceptable levels, says one producer.

Producers who have formally announced January 1 price increases for polystyrene include Amoco Chemicals Company, Dow Chemical Company, Mobil and Polysar Inc.

Fina Oil & Chemical Company (Cosden) says its November 1 price hike, which failed to gain immediate industry support, will be fully implemented by today (December 1). The company says the increase is needed now to offset higher raw material costs.

Huntsman Chemical Corporation says it is sticking with its December 1 price increase, but Dow deferred its December increase until January 1 to give customers a chance to "digest" it, the company says. Dow's ignition-resistant grade will go up 2 cents per pound on December 1, as originally scheduled.

As of last week, Chevron Chemical Com-

Continued on Page 29

Chemical Marketing Reporter

VOLUME 230
Number 22

DECEMBER 1, 1986

Phenol Discord Hurts Two Price Initiatives

Twice this quarter, phenol producers have failed in efforts to raise pricing despite rising feedstock costs.

Last quarter, the inability of a July 1 price initiative to stick was attributed in large part to a 10-cent-per-gallon drop during that month in benzene contract pricing from 80 cents per gallon to 70 cents per gallon.

Since that time, however, the benzene market has firmed to a current contract level of 92 cents per gallon, and cumene pricing has for the most part, followed.

Phenol producers say their lack of success in raising prices October 1 and November 1 can be traced to competitive pressures in the industry that are related most particularly to buyers in the phenolic resins sector, who account for nearly half of phenol demand.

"Phenolic resin people have been unwilling or unable to get their prices up," says a phenol producer, and as a result these resin producers are said to have pressured phenol producers into not raising their prices. "Phenolic resin guys are playing one (phenol producer) against the other," says an industry observer.

In an industry often described as, highly competitive, phenol producers say there was less than total support for this quarter's two price initiatives. Unless the industry is running full-out, "all it takes is one guy to hold off" in order to bring down the effort, a producer comments.

Producers say that demand has been steady at a reasonably strong level, most especially from the bisphenol-A sector, which accounts for about 20 percent of the phenol produced. The month of December, however, is said to be historically a fairly slow month for phenol demand.

This seasonal pattern has made unlikely any movement in phenol pricing for December, though benzene costs have risen since the failure of the November 1 price initiative. However, when cumene contracts are settled early this month, benzene's 5-cent-per-gallon rise will be a consideration.

Cumene pricing was at 14 cents per gallon in September, followed benzene up to 14½ cents per gallon in October, and, for most suppliers, rose to 14¾ cents per gallon in November.

It is reported that some suppliers held pricing at 14½ cents per gallon in November in response to pressure from the phenol industry. "It's a vicious circle" on pricing matters, says a source, as phenolic resin makers' woes reverberate back through the phenol industry to cumene producers.

It is expected that cumene will top 15 cents per gallon this month, and that continued upward movement in benzene, which already has risen on the spot market above the new December 1 contract level, could result in additional feedstock cost pressure January 1.

Phenol producers say that the August 1 to January 1 rise in feedstock costs could well amount to 3 to 4 cents per gallon on phenol were the costs passed through.

"It would have been a lot easier if we had gotten our price up when it was timely" in

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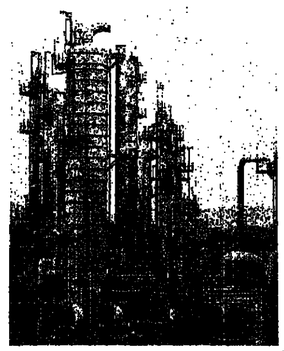

PHENOLS'S FAILURE: Producers can't get prices up, despite rising feedstock costs.

Chlorofluorocarbons Phaseout Is Urged by US Legislators

A bipartisan group of lawmakers are calling for a phase-out of fully halogenated chlorofluorocarbons, man-made chemicals that some scientists have linked to depletion of the earth's protective ozone layer. In a letter to Secretary of State George Schultz, eight senators say they would "prefer that the next step take the form of a strong international control protocol calling for a phase-out of fully halogenated CFC's. "If during the upcoming negotiations, however, it appears that no agreement will be reached or that the agreement will fall short of requiring the phase out, we are committed to introducing legislation in Congress that would require the gradual elimination of such CFC's."

The letter was signed by Sens. Robert T. Stafford (R-Vt.), George Mitchell (D-Maine), John Chaffee(R-R.I.), Gordon Humphrey (R-N.H.), Albert Gore (D-Tenn.), Max Baucus (D-Mont.) and Patrick Leahy (D-Vt.)

The senators also say that in the event that a strong international accord is not produced, and in order to "protect our environment and our domestic industry, we would include a provision to prohibit importation of goods that fail to meet the same standards and requirements that are applicable to products produced in this country."

A member of Congress may be included in the US delegation to the next meeting of the United Nations Environment Programme which is scheduled to begin December 1.

In the last session of Congress, Rep. Bill Richardson (D-N.M.) introduced a bill requiring the phase-out in five years of substances "anticipated to cause or contribute to stratospheric ozone depletion, climatic warming, or any other atmospheric or climate modification."

Drug Papers Seen As Boon to US

US pharmaceutical industry scientists contributed more than 19,000 papers and 6000 meeting abstracts to publicly available scientific knowledge during the ten-year period from 1973 to 1982, according to a recent study prepared for Pharmaceutical Manufacturers.

The authors of "The Quest for Knowledge: Contribution of US Pharmaceutical Industry scientists" searched more than 2,300 biomedical, chemical, biological, and other scientific journals indexed in the "Science Citation Index" (SCI) for research papers authored or co-authored by U.S. pharmaceutical industry scientists.

The monetary value of the industry's contribution is also substantial, according to the report. The cost of a typical biomedical paper supported by NIH is approximately $100,000 in 1982 dollars. Based on this estimate, the value of the contribution of the US pharmaceutical industry to public knowledge exceeds $150 million per year.

Air Separation Unit Slated in California

UGI Corp., says that its AmeriGas subsidiary has awarded an $11 million contract to Ansutech Inc. for construction of a 250-ton-per-day air separation plant in northern California.

Ansutech will build the facility for AmeriGas Industrial Gases in the Laguna Business Park near Elk Grove in Sacramento County which is zoned for semiconductor industry development. The plant is scheduled to be in operation early in the second quarter of 1987.

The facility will produce liquid nitrogen, oxygen and argon which are used in petrochemical, steel, welding, medical and laboratory applications. In addition, it will produce ultra-high-purity nitrogen to serve the electronics industry in northern California and provide cylinder gases to AmeriGas for distribution through its chain of Welder's World retail stores in the state.

Under the contract, Valley Forge-based Ansutech is responsible for turnkey construction of the plant, including engineering, design, installation and start-up. Ansutech is a joint venture of AmeriGas and Nippon Sanso K.K.

Air Products Sells Stearns Catalytic

United Engineers & Constructors, a subsidiary of Raytheon Company, says that it has completed the purchase of Stearns Catalytic from Air Products & Chemicals.

The final purchase agreement was signed by United Engineers and Air Products last week, and the transfer is effective immediately.

United Engineers had announced on September 15, 1986, that it had signed a letter of intent with Air Products for the acquisition of Stearns Catalytic.

The final purchase includes the domestic operations of Stearns Catalytic, as well as the London engineering office. It excludes real estate holdings and Stearns' Canadian operations, United Engineers says.

The business volume of the combined firm will place United Engineers & Constructors among the top five engineering and construction firms in the nation. The workforce will total more than 4,500 employees.

United will operate the combined company under a new holding company, United Engineers & Constructors International. Gunnar E. Sarsten will be president and CEO of both the holding company and the primary engineering services unit, United Engineers & Constructors Inc.

El Paso Completes Revamp of PP Line

El Paso Products Company has completed renovation of one of its polypropylene lines which was partially destroyed by fire June 20. The renovated line at the company's Odessa, Tex. plant is producing high-purity grades of isotactic polypropylene, according to El Paso.

Other PP lines at the site continued in operation during the renovation. Added to PP production at Bayport, Tex., El Paso has total capacity for 350 million pounds of polypropylene annually.

Also on stream at Odessa is an amorphous polyalphaolefins plant with annual capacity for 50 million pounds. The amorphous PAO product line is being targetted for a wide range of applications from roofing, wire and cable and lamination, to adhesive compounding and carpet backing.

Eastman, Microbio In Carotene Pact

Eastman Kodak Company and Microbio Resources, Inc., San Diego, Calif., have concluded an agreement giving Kodak's bioproducts division world marketing rights to Microbio's "Provatene" beta-carotene product.

The agreement also provides for Kodak to support continuing research by Microbio in the field of aquaculture.

Microbio has been commercially marketing the beta-carotene product, which is derived from the algae, *dunaliella salina*, since early 1985. The product is sold as a food coloring and as a dietary supplement.

Baupost Raises Stake

Baupost Group Inc., an investment partnership based in Cambridge, Mass., has raised its stake in Mesa Petroleum Company to 8.7 percent, or more than 5.9 million shares, from 7.1 percent. Two members of the Baupost organization are professors at the Harvard Graduate School of Business Administration. Mesa Petroleum's chairman is T. Boone Pickens, Jr., one of the most active of the corporate raiders.

William J. Murray, who has been appointed vice-president of American Cyanamid Company's Polymer Products Division. He was most recently general manager of the engineered materials department.

Du Pont Dismantling Corpus Christi Units

E.I. du Pont de Nemours & Co. will dismantle its chlorine-based raw material production facilities at the company's Corpus Christi, Tex. plant. Dismantling will begin immediately and will result in a charge of 31 cents per share in the fourth quarter, Du Pont says.

The Corpus Christi plant will continue to produce the company's "Freon" flouorocarbons. Du Pont is "studying the options available" with respect to an idled cyclohexane production unit at the site.

Du Pont said in July that it would purchase all chlorine-based raw materials used in production of fluorocarbons and would idle certain facilities at Corpus Christi pending a decision on their disposition (CMR, 7/7/86, pg. 3). The raw materials include chlorine, carbon tetrachloride, chloroform and perchloroethylene.

Du Pont began to purchase chlorine-based raw materials used in production of fluorocarbons earlier this year after worldwide supply forecasts showed it is more advantageous for the company to buy the chemicals than produce them.

Ontario's Chemicals Operation to Close

Ontario Paper Company will close down its sulfite pulp plant at Thorold, Ontario, Canada, late in 1987 and as a result will also close down the related chemicals business unless a buyer can be found for it.

The sulfite plant currently supplies spent sulfite liquor for a chemical byproduct operation which produces vanillin, salt cake and industrial alcohol.

Earlier this year, Ontario Paper started construction of a new deinking plant to produce pulp from recycled newspapers and coated papers at the Thorold mill. The deinked pulp will replace sulfite pulp in the production of newsprint.

Sun and Chromalloy Agree on Merger

Sun Chemical Corporation and Chromalloy American Corporation said their boards of directors have approved an agreement on merger and an increased exchange ratio. Under the merger agreement, each outstanding share of Chromalloy common stock not owned by Sun would be exchanged for 0.34 of a share of Sun Class A common stock following Sun Chemical's proposed recapitalization.

Each outstanding share of Chromalloy convertible preferred stock would be exchanged for one share of a new Sun convertible proffered having identical rights and preferences and convertible into shares of Sun Class A common.

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Du Pont Gets Rights

E.I. du Pont de Nemours & Co. has obtained rights to an advanced system for monitoring anticoagulant therapy from Biotrack, Inc., Sunnyvale, Calif. Terms were not disclosed.

Biotrack's "Protime" test system is reported as the first immediate, accurate test for critical dosage management of the anticoagulant, warfarin. Du Pont Pharmaceuticals lays claim to having the largest-selling warfarin product in its "Coumadin," used for managing blot clots in patients.

The Biotrack system consists of a hand-held instrument that uses a single drop of blood in a one-step process that can be performed in minutes by a physician or nurse. This allows the physician to make immediate dosage adjustments. Current warfarin monitoring — called prothrombin time testing — usually requires a laboratory analysis.

In addition to marketing and distribution rights for the product in North America, the agreement also gives Du Pont rights to a software system, called "Warfcalc," for dosage management.

Approved by Food & Drug Administration in June, the system is being test marketed and will be sold nationally by Du Pont during the first quarter of 1987.

Founded in 1984, Biotrack is a privately-held company that develops portable microelectronic/chemical consumable products for medical personnel and consumers to diagnose, treat and monitor disease.

Du Pont supplies a wide variety of research, diagnostic and therapeutic healthcare products, with annual sales of more than $1 billion worldwide.

Petroleum Industry Sees Heavy Burden in Future

Recent or pending federal government legislative and regulatory actions could add an amount to the depressed petroleum industry's annual costs that is greater than the combined 1985 net income of the 400 largest domestic oil and gas companies, according to a study by the American Petroleum Institute.

The API study, "Recent Or Potential New Costs Imposed By Government On The Petroleum Industry," said these new costs when combined could be nearly $18 billion annually when averaged over the first five years of each program.

The study said this amount exceeds the $16.5 billion earned in 1985 by the 400 leading U.S. energy companies that accounted for nearly 75 percent of that year's U.S. crude oil production.

The study said these costs will impact at time when the petroleum industry has been severely hurt by falling crude prices.

"Many influential people, taking one policy initiative at a time, recognize the cost of that initiative to the petroleum industry but consider only that cost," says API President Charles J. Dibona.

"They conclude that it is a cost that can be tolerated, even if benefits are undertain and even if oil companies are not a logical funding source. They do not perceive that the cumulative costs of many such policies can, in the end, be intolerable for both the industry and eventually the nation."

Federal actions completed within the past 18 months — lead phasedown ($500 million per year), tax reform ($2 billion per year) and Superfund reauthorization ($700 million per year) — will increase costs to the petroleum industry by some $3.2 billion annually, the report said.

Actions under consideration could impose additional annual costs of some $14.5 billion, depending on how these requirements are implemented, the study said.

Proposed Federal legislation and regulations and their possible average costs are: Clean Water Act regulations — $100 million; banning landfarming of refinery wastes — $200 million; underground tank regulation — $200 million; stage II vapor recovery requirements for service stations — $200 million to $650 million; gasoline volatility reductions — $300 million; changes in tank truck requirements — $500 million; acid rain controls — up to $7.5 billion; and designation of exploration and production wastes as hazardous substances — $8 billion.

The study concludes that the ultimate result of the added cost will be reduced output in all sectors of the petroleum industry, an increase in the nation's already growing reliance on foreign oil and products, and increased costs to energy consumers.

The study identifies each of the actions that could contribute to the cost total and discusses the dollar estimate for each.

Toxics to Remain Priority In the Next Congress

Toxic chemicals and the possible risks they pose to public health and the environment will remain a hot issue next year in the 100th Congress, the Reagan Administation's top environmental official recently told chemical industry executives in Washington.

Lee M. Thomas, administrator of Environmental Protection Agency, said the public's concern over toxic substances in the environment, as reflected by the approval of Proposition 65 by the voters of California on election day, will put pressure on Congress to keep a watchful eye on the chemical industry and other businesses that handle hazardous materials.

The California initiative establishes zero tolerance levels for any substance considered to cause cancer or reproductive toxicity in animals or humans. The zero discharge requirement will affect thousands of chemicals, without considerations of degree-of-risk, exposure levels, and economic and technical feasibility.

Mr. Thomas said that while the new Democratic Congress is not likely to pass such a stringent law, the environmental legislation it does approve will probably be tougher on industry than the measures passed in recent years.

Two examples he cited are the Clean Water Act amendments and the reauthorization of the Federal Insecticide, Fungicide & Rodenticide Act. The clean water bill was unanimously passed by Congress but it was vetoed by the President. The pesticide statute was approved by both the House and Senate but died in the final hours of the session when the two chambers failed to agree on a compromise version.

Mr. Thomas predicted that both issues will receive prompt attention from Congress next year and will be sent to the White House for President Reagan's signature.

"I don't expect major revisions in the areas dealing with toxics, but if anything, those provisions will be strengthened," said the EPA chief.

Mr. Thomas said the Clean Air Act will be a major subject of debate in Congress over the next two years and he predicted that lawmakers would move to place new restrictions on chemical plant emissions and approve controls on acid rain.

He also said the issue of groundwater contamination by toxic substances will probably be addressed by comprehensive legislation for the first time.

Aspartame Wins OK; A Critic's Bid Fails

Food & Drug Administration last week rejected a petition seeking to ban aspartame as an "imminent hazard to the public health," dismissing a consumer group's concerns linking the sweetener to epileptic seizures.

Consumer Nutrition Institute filed the petition in July based on reports from a team of Massachusetts Institute of Technology researchers that more than 80 people suffered seizures after eating or drinking products containing aspartame, which is sold by Nutrasweet Company (formerly G.D. Searle) under the tradename "NutraSweet."

The consumer petition argued that "the existence of these 80 cases meets the FDA definition of an imminent hazard to the public health requiring the FDA commissioner to expeditiously remove a product from the market."

In October, the group amended its complaint, citing more than 60 persons who reported eye damage after consuming products flavored with the sweetener.

But FDA responded that "the evidence submitted is not of the type that...establishes a link between aspartame consumption and possible harm to the public health."

James Turner, a CNI attorney who has waged a 15-year battle challenging the safety of aspartame, said the decision was "not unexpected" and will provide his group with "the basis for further action in court."

FDA associate commissioner John Taylor said in a letter to Mr. Turner, "we conclude that the evidence does not support any finding that any public harm is presented by the consumption of aspartame."

Dr. Gerald Gaull, vice president for nutrition and medical affairs for Nutrasweet, said, "We have no new scientific evidence that in any way suggests that our product is anything but completely safe."

He said aspartame "has been tested extensively in human beings, without any occurrence of seizures under controlled conditions" and that recently-completed

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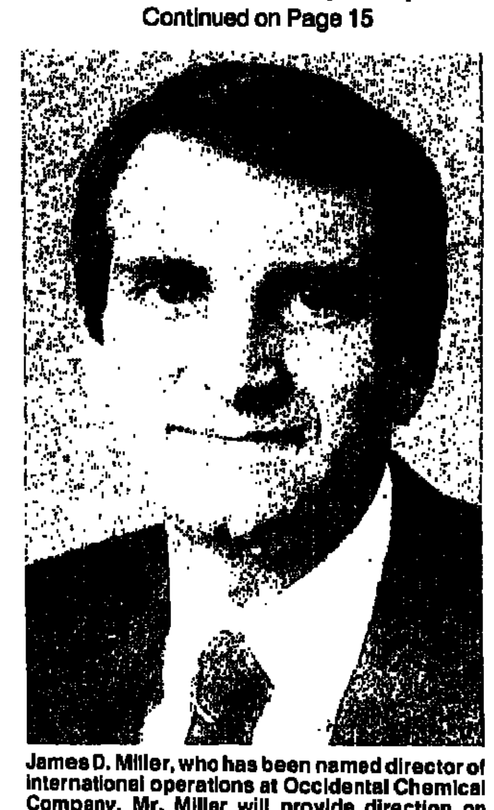

James D. Miller, who has been named director of international operations at Occidental Chemical Company. Mr. Miller will provide direction on operational matters to all the company's international businesses and will be responsible for certain Latin American operations.

Textile Imports Targeted

Major trade legislation aimed at putting a cap on textile imports will be introduced shortly after Congress convenes in January, says John N. Gregg, president of Avtex and chairman of the Fiber, Fabric and Apparel Coalition for Trade.

"Since the election, we can see quite a different attitude" in Congress toward trade matters, Mr. Gregg notes. He says the Democratic takeover of the Senate significantly increases the chances of enacting a textile bill.

Mr. Gregg warns there will be a tremendous increase in textile and apparel imports from China next year, and says the solution must come through legislation rather than bilateral agreement.

Meanwhile, a 13-member congressional delegation returning from Hong Kong says it warned that country that even though it has adopted a free-trade policy, Hong Kong may not be exempted from future anti-import legislation that is sure to come up in Congress next year.

The group urged Hong Kong officials to work to lower the protectionist barriers and encourage other Asian nations to do the same.

Rep. Dan Rostenkowski, D-Ill., chairman of the House Ways and Means Committee, said, "We stress to your officials the need to help in breaking open new markets." If this is not done, he said the US will increase its barriers.

Bhopal Disaster Cited By Worldwide Labor Groups

The AFL-CIO joined trade unionists around the world last week in calling for the adoption of 14 steps to prevent such chemical disasters as occurred in Bhopal, India.

The proposal calls for specific action by corporations, by Congress and by the International Labor Organization and pledges trade union bodies around the world to share information and continue research on chemical dangers.

The 14 points were adopted by the International Confederation of Free Trade Unions, of which the AFL-CIO is a member.

The principles are an outgrowth of an international study of the December 1984 disaster which killed 2,500 people in Bhopal. Margaret Seminario, AFL-CIO health and safety specialist, was a member of the 12-person fact-finding committee which went to India and wrote the Trade Union REport on Bhopal in July 1985.

"Americans should not regard Bhopal as unrelated to our workplaces," says Ms. Seminario. "The fact is that none of the conditions which led to the disaster would have been violations of specific standards or regulations of OSHA or EPA."

Ms. Seminario says the nations of the world obviously vary in how close they are to complying with some of the 14 principles. For example, she says, "As a result of Bhopal and US trade union efforts, a new Federal law guarantee the public the right to know about chemical hazards in their communities."

On the other hand, she says the US should pay close attention to other ICFTU recommendations, like plant design and insurance compensation.

The unions' report declares that adoption of the 14 points might have helped prevent other chemical disasters, such as the 1974 explosion at a Flisborough, England plastics plant, the 1976 contamination of Seveso, Italy with dioxin, and the recent Basel, Switzerland warehouse fire which spilled

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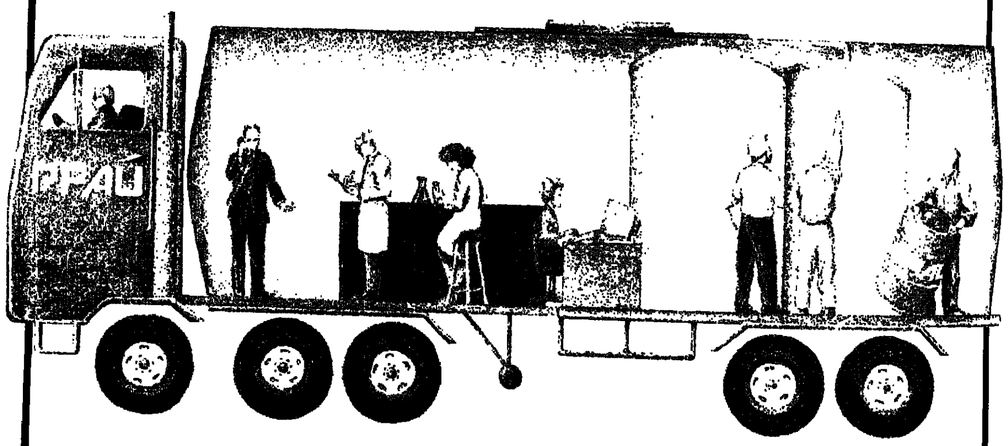

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C-I-L Fertilizers: The company is cutting back operations.

C-I-L Revamps Hg Chemicals, Trims Its Staff

C-I-L Inc.'s agricultural unit will delay the startup of one of its ammonia plants from planned maintenance into the first quarter of 1987, and will reduce its staffing.

"The economics of the agricultural industry in Canada and the US have been undergoing fundamental changes," says agricultural general manager Doug Coombs. "C-I-L must continue to provide market-oriented products and services on a profitable basis," he adds.

Mr. Coombs emphadizes that the company remains committed to ammonia and nitrogen fertilizers.

A key factor, he says, is the expectation that the cost of natural gas delivered to its Lambton plant will be reduced to levels being paid by US competitors.

Because of low ammonia prices, the company is not able to take on additional ammonia business beyond current levels, but it says a number of market and natural gas initiatives are under way to improve competitiveness.

"The objective of delyaing the ammonia plant startup and the reduction in staff is to improve our competitiveness in the long term," Mr. Coombs explains.

"This is part of our continuing effort to better position ourselves for the future, not just a reaction to the losses we have incurred due to low prices for our manufactured products and the uncompetitive cost of natural gas at Lambton works."

Brazil Mulling Petrochemicals For the 1990's

Copene (Petroquimica do Nordeste SA) is reported seeking approval for a plan to double its basic petrochemicals capacity at Camacari, Brazil, at a cost of over $800 million. Current ethylene capacity at the site is rated at about 460,000 tons annually.

Gas oil feedstock for the project, which would include proportionate increases in propylene, butadiene and benzene capacities, would come from Petrobras, the state-owned oil company.

The development follows an earlier announcement that Unipar (Uniao de Industrias Petroquimicas SA) and its Petroquimica Uniao affiliate want government approval for a new $550 million petrochemical complex to be based on natural gas liquids from gas fields discovered off the coast of the state of Rio de Janiero.

That complex, also projected for the early

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Phosphoric Acid Bid Launched by Monsanto And FMC Corporation

Monsanto Chemical Company and FMC Corporation have filed antidumping and countervailing duty petitions with the US government concerning imports of industrial phosphoric acid from Belgium and Israel. All other US producers of industrial phosphoric acid are said to have indicated their support for the petitions.

The petitions, filed with the US Department of Commerce and the US International Trade Commission allege that industrial phosphoric acid imported from the two countries is being sold in the US at dumped and subsidized prices and that, as a result, the domestic industry producing these goods is being materially injured or threatened with material injury.

A Monsanto spokesman says the petition was filed November 5 and appeared in the *Federal Register* last week. Under current regulations, the government has a statutory deadline of 45 days until December 22 to complete its preliminary investigation.

The foreign companies involved in the suit are Societe Chimique Prayon-Rupel SA of Belgium and Haifa Chemical, Negev Phosphates and Rotem Fertilizers, all of Israel.

Last week, a representative of Prayon-Rupel said of the suit, "We believe their action is totally without foundation or merit."

Michael E. Miller, vice president of Monsanto, said that Monsanto's share of the market has declined, prices for the product have fallen, and the company has been forced to close a production unit in Kearney, N.J.

"We believe the action we have taken is in the best interest of our customers as well as the domestic phosphorus industry, said William W. Wheeler, FMC Phosphorus Chemicals Division manager. He added that if the current practices of the foreign producers continue to go unchallenged, the viability of the domestic phosphorus chemicals industry could be disrupted.

By one account, phosphoric acid imports will amount to 69 million pounds this year, about 14 percent of the US market. Belgium and Israel account for 86 percent of the imported share.

In 1985, phosphoric acid imports were 50 million pounds, about 10 percent of the market that year.

One spokesman said that US producers are being forced to sell at prices that are 15 to 20 percent off of list levels. Technical grade material at 75 percent strength currently lists at 29 cents per pound.

"If we are successful, as we certainly expect to be," said Mr. Wheeler, "additional duties will be placed on the Belgian and Israeli imports to offset the unfair advantage that dumping and subsidization provide them."

The Commerce Department will determine whether phosphoric acid imports from

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Diamond Crystal to Buy

Diamond Crystal Salt Company has signed an agreement in principle to purchase all of the capital stock of Sol-Aire Salt and Chemical Company from Amax Inc.

The planned acquisition is the first step in a $12 million project to build a major solar salt facility on Sol-Aire properties at the Great Salt Lake, Utah, says Roy C. Satchell, president and CEO of Diamond Crystal.

The purchase price includes about $800,000 in cash, equivalent to the net book value of Sol-Aire on the closing date, plus future royalties to be paid based on salt shipments.

The Diamond Crystal project will include recovery of a portion of the brine concentrating ponds which were lost when an Amax dike failed during a June 1986 storm. Diamond Crystal also plans to build new salt crystallizing ponds and a processing plant on adjacent Sol-Aire property near Timple, Utah. According to Mr. Satchell, the operation will employ about 100 people. Construction is expected to begin in December.

The project will provide Diamond Crystal with a domestic source of solar salt for part of its predominantly Eastern US market while allowing the company to expand to the West, Mr. Satchell indicated.

"Solar salt is increasingly preferred over rock salt for certain applications such as water conditioning. The project will allow us to better serve the changing needs of our customers," Mr. Satchell stated.

Diamond Crystal has not produced rock salt since it lost its Louisiana mine in an oil well drilling accident in 1980.

Hazardous Waste Decree Signed By Fifty-One Firms, Including Hunt

Department of Justice has filed a proposed consent decree requiring 51 defendants, including Hunt Chemical, to pay for the cleanup of a superfund hazardous waste site in Rhode Island.

The government estimates that the cleanup of the Western Sand and Gravel, Inc. site will cost at least $5.8 million. The site is on Environmental Protection Agency's priority cleanup list under the superfund program.

"The decree requires that the defendants compensate the government for past cleanup costs and contains provisions for site closure, says F. Henry Habicht, assistant attorney general.

The defendants have agreed to the decree's terms. The site is located in Burrillville and North Smithfield, R.I.

The decree concludes a civil complaint filed on October 2 alleging that hazardous wastes had contaminated soil and both surface and groundwater at the 20-acre site. The complaint asked that the defendants be required to remedy environmental law violations and to pay cleanup costs.

The defendants, besides Western Sand and Gravel and its president, James V. Cardi, Jr., are 44 companies that arranged for wastes to be taken to the site and five companies that transported wastes.

The consent decree requires the defendants to create a $3,822,429 escrow account to be used to pay past and future costs related to the site cleanup.

The Federal government will receive $2,699,603.90 from the fund. More than half is for past costs and projected costs of oversight over closure of the site and contamination studies. About $1.1 million will finance EPA's construction of a permanent alternate drinking water supply system for consumers near the site whose wells have been contaminated.

There are some 56 parcels of land and 39 drinking water wells within a half mile of the site. The government found underground contamination requiring remedial measures.

The decree contains special requirements for one of the defendants, Olin Hunt Specialty Products, Inc., formerly the Philip A. Hunt Chemical Corporation of West Paterson, New Jersey. The government said Hunt

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Carbide Gets FTC to Shift It '77 Order

Federal Trade Commission last week modified a 1977 consent order with Union Carbide Corporation by removing references to welding products and gas welding apparati, but rejected the company's request to reopen and modify two other provisions involving long-term industrial gas contracts.

The commission voted 4-1 to modify the order, with Chairman Daniel Oliver dissenting.

FTC denied Union Carbide's request that it be allowed to enter into long-term contracts that require industrial gas distributors to buy gases from the company.

"There is substantial reason to believe that Carbide is violating" that provision of the order, the commission said. "The commission believes, as a matter of policy, that generally it should refrain from reopening an order provision when there exists reason to believe that a respondent is in violation of the very provision it seeks to modify."

In addition, FTC declined to reopen and modify a requirement that Union Carbide get prior FTC aproval before making certain acquisitions and instead allow the company to give the agency 30 days prior notice.

The commission said Union Carbide did not show that modification of the prior approval requirement was necessary because of changes in the law or facts.

In a dissenting statement, Chairman Oliver said he agreed with the commission's decision to remove the order's references to welding because Union Carbide is no longer involved in the welding business.

But he said he disagreed with the decision to continue prohibiting the company from entering into long-term contracts with gas distributors.

Although he "strongly advocates vindication of the commission's orders," Mr. Oliver maintained "the order's prohibitions on long-term contracts places Union Carbide at a competitive disadvantage" and "forcing compliance with errant commission orders places the commission in the undesirable position of harming rather than helping consumers."

Animal Feed Contaminated With Heptachlor

Federal officials have indicted four former Arkansas gasohol plant operators for selling feed contaminated with the banned pesticide heptachlor to dairy farmers in Arkansas, Missouri and Oklahoma.

The government may have to pay up to $10 million in indemnities to dairy farmers because forty-three cow herds remain under quarantine. Officials say the carcinogenic pesticide continues to be found in their milk.

Charges in the 52-count indictment include racketeering, mail and wire fraud and violation of Environmental Protection Agency and Food and Drug Administration regulations.

Robert Beuley, inspector general of the Agriculture Department, said the men operated a gasohol plant at Valley Feeds in Van Buren, Ark., and apparently used heptachlor-treated seed grains to distill alcohol for fuel use. The men were charged with selling a contaminated byproduct as animal feed.

Last March, FDA and state health agencies confirmed the presence of heptachlor in milk from cows in Arkansas, Missouri and Oklahoma. Initially, 137 herds were quarantined. Experts believe it may take two years for some of the cows to become free of contamination.

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6. Built and continuously developed the largest existing gum processing plant in the world.
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9. Created a foundation, AIDGUM, for developing gum production and training gum producers.
10. Granted scholarships to more than 20 students or engineers from producing countries to be trained at ICOL and in various labs in biogeography, plant genetics, sylviculture, biological and botanical science.
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News Capsule

AGA, Nippon Sanso

AGA of Sweden and Nippon Sanso of Japan are planning a technology exchange agreement whereby AGA will use know-how equipment and Nippon Sanso would use AGA techniques for pulp bleaching.

Eastman Expands

Eastman Chemical Division of Eastman Kodak Company plans to expand production of distilled monoglycerides at its distillation products industries facility in Rochester, N.Y. Modernization of the existing monoglycerides facility, scheduled to be on stream by the fourth quarter of 1987, will increase distillation capacity by 30 percent, the company says.

FMC May Sue Boesky

Contrary to media reports, FMC said last week that it had not ruled out legal action against embattled arbitrageur Ivan Boesky in connection with the recent Securities & Exchange Committee complaint against Mr. Boesky. The company has formed a special committee to determine any action it will take as a result of the insider trading case.

Thin Film Addition

Dixon Industries Corporation, Bristol, R.I. a designer and manufacturer of high-performance and engineered plastic materials and components, says it is expanding its film and sheet production capabilities for the manufacture of thin film down to the ¼ mil range. The thin film production capability is expected to be operational by February 1987.

Aquifer Repairs

Cambridge Analytical Associates, Inc. has expanded Bioremediation Systems Division with the opening of an office specializing in aquifer restoration. The office, based in Princeton, N.J., will be staffed by Dr. Richard A. Brown, Dr. Robert D. Norris and Joan F. Ridler, all formerly of FMC's Aquifer Remediation Systems (ARS). Dr. Brown will assume responsibilities as director of business development. Dr. Norris will be director of operations. Miss Ridler will be the marketing manager.

Superabsorbent Polymer

Chemdal Corporation, a unit of American Colloid Company, Skokie, Ill., says it has secured financing for the construction of a 29-million-pound-per-year superabsorbent polymer plant in Aberdeen, Miss. The facility is due on line in mid-1987. American Colloid already operates an 8-million-pound-per-year superabsorbent polymer facility in Lovell, Wyo.

Drug Store Boost

Retail drug store sales increased 9 percent in 1985, reaching $47 billion, according to the 1986 Nielsen Review of Drug Stores Trends. For the first half of 1986 the growth rate slowed slightly to 7 percent as price increases remain moderate. Chain drug outlets — those with four or more stores under the same ownership — and independent-operated drug stores have been growing at the same 7 percent rate thus far in 1986.

PMA Biotechnology

Pharmaceutical Manufacturers Association president Gerald J. Mossinghoff has appointed Dr. William Szkrybalo director of biotechnology programs in PMA's division of science and technology. Prior to joining PMA, Dr. Szkrybalo was manager of the chemical operations planning department at Hoffmann-La Roche Inc. As director of biotechnology programs, Dr. Szkrybalo will manage PMA's biotechnology advisory committee, comprised of senior strategic biotechnology planners from PMA firms.

Robert J. DeGange, who has been named vice-president of sales in the Industrial Materials Operating Division of Owens-Corning Fiberglas Corporation.

American Brands Seeks Acquisition Of Chesebrough

American Brands, Inc. said that the company had entered into a definitive credit agreement with a group of banks to provide financing of $3 billion for the company's proposed acquisition of Chesebrough-Pond's, Inc. for $66 per share.

Chesebrough-Pond's stated that it had received the unsolicited acquisition proposal from American Brands and that they had retained legal and financial advisors to review the proposal as well as other alternatives designed to maximize shareholders' value. Recently, large-scale share buybacks have been the most widely used defenses against merger.

Edward Whittemore, chairman and chief executive officer of American Brands, said the company is hopeful that Chesebrough-Pond's directors and management will favorably consider the proposal. "We are prepared to enter into immediate negotiations and hope to reach an agreement on friendly terms promptly," Mr. Whitemore said.

Revlon Group Drops Attempt To Buy Gillette

The Revlon organization and its allies threw in the towel in their attempt to acquire the world's largest toiletry and razor blade company last week — Gillette Company — and settled for a smaller acquisition — the Max Factor prestige cosmetics business.

Revlon Group, Inc. and MacAndrews & Forbes Company, Inc. said that their affiliate, Orange Acquisition, Inc., had sold the 9,226,300 Gillette shares they owned at a price of $59.60 per share. At the same time, the consortium terminated their offer to purchase all of Gillette's shares.

Gillette and its investment banker had told Revlon in no uncertain terms that they were pursuing alternative transactions that would effectively deprive Revlon and its friends of an opportunity to gain control of the Boston, Mass.-based company.

Drexel Burnham Lambert, Inc., whose financing of the proposed takeover had encountered some skepticism because of fallout from the Ivan Boesky affair and the effect of that on high-yield, high-risk financ-

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Urethane In Alcohol: A New Health Threat?

A consumer group asked the Federal government for a recall last week of nearly 50 alcoholic beverages containing high levels of urethane, a naturally-occurring chemical that is a suspected carcinogen in animals.

"People who drink even moderate amounts of these beverages are at risk of developing serious health problems," says Bruce Silverglade, legal affairs director for the Center for Science in the Public Interest.

"They contain up to 5,000 times the amount of urethane considered safe," he says.

CSPI's petition urged Food & Drug Administration to set standards similar to those the Canadian government established in 1985. On the basis of laboratory tests, Canada limited the quantity of urethane permitted in distilled spirits and wines sold in the country.

CSPI also accused FDA and the alcoholic beverage industry of attempting to hide the problem of urethane-contaminated beverages, a charge denied by the government and the industry.

"We do not think this is an absolute emergency," says FDA Commissioner Dr. Frank Young. "Urethane has been there as long as spirits have been fermented and distilled. What we need to do is establish responsible standards and get the appropriate forces in place to make sure those levels aren't exceeded."

Dr. Young adds, "The question is when do you push the panic button. We think we're no where near that point."

John Norris, FDA deputy director, says the agency has been working with the industry for the past month to eliminate the problem. "If we cannot eliminate the urethane from all beverages or reduce it to insignificant amounts, then we will consider removing them from the market," he says.

FDA found urethane levels in excess of the Canadian standards in one of every five liquors and wines sampled last Summer. The Canadian standards were prompted by the 1977 findings of German researchers who tested urethane in rodents and found that cancer occurred more often in rats fed major doses of the chemical.

Representatives of the Distilled Spirits Council of the US note that urethane has never been found to be a carcinogen in humans and accuse CSPI of "frightmongering."

"Urethane is an issue looking for a problem," says Janet Flynn, a spokeswoman for the industry group. She adds that the CSPI petition has "irresponsibly created fear in the minds of consumers."

Fina Cited by OSHA

Department of Labor has cited the Fina Oil & Chemical Company for 46 alleged willful violations of the Occupational Safety and Health Administration's recordkeeping requirements and proposed fines of $184,000.

The violations allegedly occurred at the company's Port Arthur, Tex., plant from January 1985 through March 1986. OSHA proposed penalties of $4,000 for each of the alleged willful violations.

The Fina citations follow recent similar actions by the Labor Department against a Union Carbide plant at Institute, W. Va., and a Chrysler Corporation plant at Belvidere, Ill., also accused of violating on-the-job safety and health recordkeeping requirements.

"Recordkeeping is the foundation on which any successful safety and health program is built and we cannot accept indifference on the matter," Assistant Secretary of Labor for Occupational Safety and Health John A. Pendergrass said in announcing the citations against the Texas oil refinery.

Fina's alleged violations were discovered in April during an inspection of the Port Arthur refinery as part of OSHA's special emphasis program on the chemical manufacturing industry. The plant employs about 480 people.

The alleged violations were discovered by comparing the firm's logs and medical records with the annual summary of injuries and illnesses required by OSHA. The alleged violations included failures to record instances of restricted work activity, medical treatment and illnesses.

Fina has 15 working days to contest these citations and the proposed penalties.

A willful violation is defined by OSHA as one in which an employer either knew that what was being done constituted a violation or was aware that a hazardous condition existed and made no reasonable effort to eliminate it.

Toxic Chemical Test Methods Evaluated at Battelle Meeting

Toxicologists from around the world met recently at Battelle to identify, evaluate, and recommend nonmammalian systems for use in toxicity testing. Of the nearly 70,000 discrete chemicals in the marketplace, fewer than 10 percent have enough toxicity test data to assess their risk to human health and safety.

During the conference, held November 11-13 at Battelle's Columbus Division, international toxicology experts discussed nonmammalian organisms including protozoa, algae, sponge, hydra, planarians, mollusks, insects, fish, amphibians, and chickens. Additionally, they considered such test systems as computer models.

According to Dr. Thomas D. Sabourin, Principal Research Scientist at Battelle, nonmammalian test systems increasingly are becoming a viable alternative to traditional laboratory animals in biological testing due to changes in approaches to regulation, high costs and length of studies, and issues related to the use of animals.

"For example," Dr. Sabourin explained at the conference, "the total cost and time needed to bring an agricultural pesticide to market is $10-20 million and eight to nine years. Alternative testing is simpler and less expensive to use."

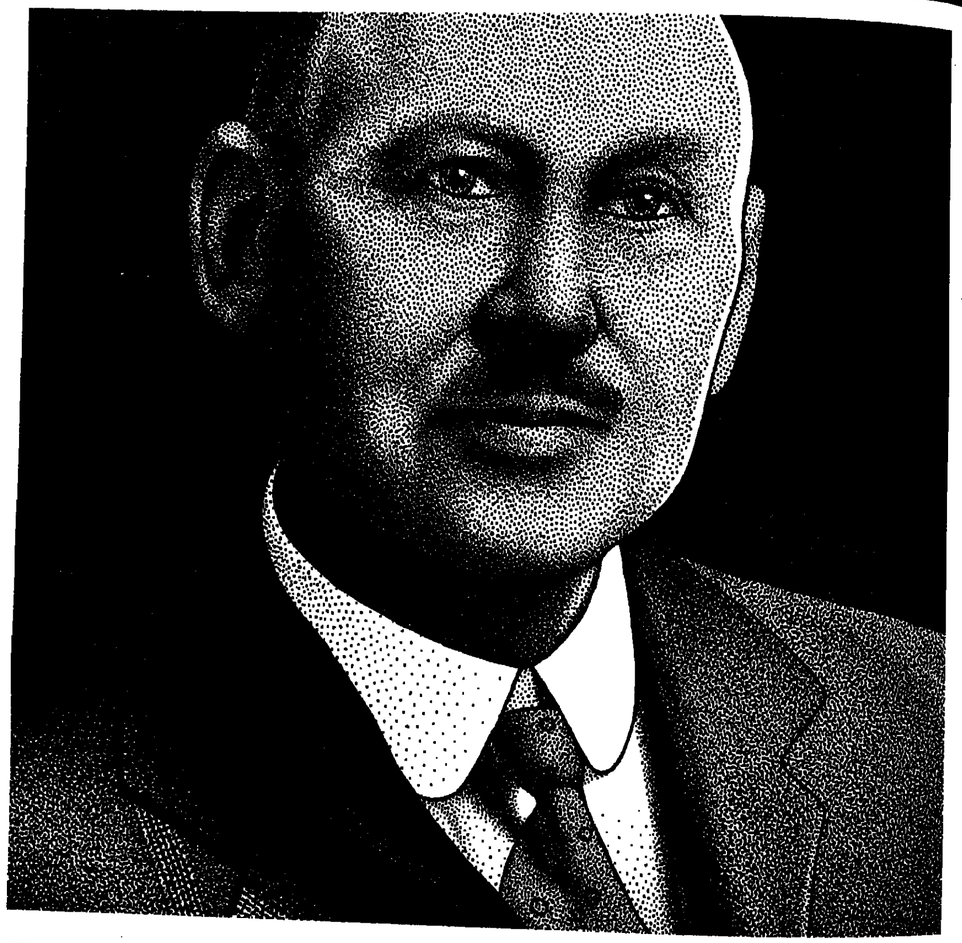
In addition to economic and time constraints, animal use issues provide compelling motivation to develop nonmammalian test systems, he said. For example, on May 6 the U.S. House of Representatives' Committee on Science and Technology met to hear experts present alternatives to animal use in research and testing.

A key report was issued in February by the US Congress' Office of Technology Assessment entitled "Alternatives to Animal Use in Research, Testing, and Education." The report examines nonmammalian test systems as well as exploring the rationality and ethics involved with higher animal testing.

In addition to mentioning animal use concerns, speakers at the Battelle conference touched on key legislation affecting animal research. This legislation is influencing the trend towards use of nonmammalian test systems, Dr. Sabourin said.

Dr. Sabourin explained that the shift in testing to lower life form models is possible due to the principle of unity in diversity. This principle states that all species share com-

Continued on Page 16



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OILS, FATS & WAXES

Palm Oil Market Is Steady, Though US Buyers Mark Time

Palm oil pricing has stabilized at a firm level in the US and world markets. Palm is said to be holding its strong position by virtue of continued lacks in production in Malaysia and by steady buying in the world market.

US buyers, however, have not been contributing to the steady business that Malaysia is said to be seeing. Rather, US oil consumers are staying away from currently high-priced imports, like palm, coconut, and palm kernel oils. Instead they are going to cheaper, domestically-produced oils, particularly soybean oil.

This is a follow-through on a trend begun about a month ago when several large US oil buyers started trading away some of their bigger palm oil purchases. More buyers joined this move away from palm during the month of November, selling off their forward f.o.b. contracts, according to industry

Even some consumers who had bought c.i.f. contracts, which are more difficult to re-sell, have been trading their contracts back to sellers when possible.

Demand in the rest of the world market, meanwhile, is apparently running at normal levels. Pakistan, for instance, is said to be buying sizeable quantities on a regular basis.

The only question mark has been India, whose buying has been rather erratic. In late October the Indians bought large amounts of palm oil when the price was beginning to firm. This was interpreted as a signal that the price was unlikely to weaken; otherwise, the thinking went, India would have postponed its purchases in hopes of getting lower prices later on.

Two weeks later, though, India seemingly backed out of the market and re-sold some of its palm oil to the world market. At that point, analysts were predicting a softened palm market. Instead, though, prices have held, and India came in for 12,000 tons of palm oil in late November. While some called this amount disappointing, others were pleased to see India buying at all.

Throughout this turbulence, the Malaysians have maintained firm pricing. Producers of crude palm oil are said to be largely responsible for setting the price of the oil, and they are continuing to see refining interest and export movement from previous sales. As long as the material is moving, sources say, crude producers will see no reason to ease off on their pricing stance.

Malaysian producers also point to lower-than-expected production levels for September, October and November. Preliminary estimates made available by the Malaysian government place September palm oil production at 470,400 metric tons (MT).

This represents a decrease of nearly 50,000 metric tons compared to September 1985 production of 517,700 tons. Although this is certainly not a short supply situation, producers say that they had been counting on greater quantities of available oil.

PRICES TRENDLINES

WEEK ENDING NOV. 28, 1986

CHANGES/UP

Grease, white, choice, tanks, dlvd, NY, 1c. per lb.
Grease, yellow maximum 10%, ffa tanks, 1c. per lb.
Palm oil, NY, ¼c. per lb.
Soybean oil, Decatur, .57c. per lb.
Tallow, inedible, fancy, tanks, dlvd, NY, 1¼c. per lb.
Tallow, inedible, bleach, tanks, dlvd. NY, 1¼c. per lb.

CHANGES/DOWN

Coconut oil, NY, 1¼c. per lb.
Cottonseed, 41% bulk, Memphis, $10 per ton
Peanut, 50% bulk, SE, $5 per ton
Soybean, 44% bulk, Decatur, 10c. per ton

OILS, FATS INDEX

The Oils, Fats & Waxes index reflects the prices of 11 representative materials in this sector and the quantity of each produced in 1985.

Nov. 28, 1986	80.75
Nov. 21, 1986	80.47
Oct. 31, 1986	81.94
Nov. 29, 1985	85.68

Chemical Prices Start on Page 36

LATEST SPOT PRICES

MARKET CLOSE NOV. 28, 1986

CRUDE VEGETABLE OILS		
Coconut oil, NY	lb.	.20½
Coconut oil, Pacific	lb.	NA
Corn oil, Midwest	lb.	.20
Cottonseed oil, Valley	lb.	.17½
Linseed oil, Minneapolis	lb.	.25
Palm oil, NY	lb.	.25
Peanut oil, Southeast (restricted)	lb.	.16½
Soybean oil, Decatur	lb.	.28
	lb.	.1473
REFD. VEGETABLE OILS		
Coconut oil, Ltw., NY	lb.	.26
Corn, bulk, tanks	lb.	.2803
Cottonseed oil, bulk, tanks, NY	lb.	.2634
Peanut oil, bulk, tanks, NY	lb.	.3880
Soybean salad oil, NY	lb.	.19½
OILMEALS		
Cottonseed, 14% bulk, Memphis	ton	$140
Linseed, extracted, 34% bulk, Fargo	ton	$105
Peanut, 50% bulk, SE, Alabama	ton	$185
Soybean, meast., 44% bulk, Decatur	ton	$151.50
FATS & GREASES		
Grease, white, choice, tanks, dlvd., NY	lb.	.11¾
Grease, yellow maximum 10%, ffa tanks	lb.	.10½
Lard, loose, bulk tanks, dlvd., Chicago	lb.	.13½
Tallow, inedible, fancy, tanks, dlvd., NY	lb.	.13½
Tallow, inedible, blch., tanks, dlvd., NY	lb.	.13¼

VEGETABLE OILS

CASTOR OIL — The price of this oil has firmed up in anticipation of higher pricing from Brazilian suppliers. Currently quoted levels in the US range between 32c. and 34c. per pound for raw No. 1 Brazilian material in tanks.

"The market is showing signs of increased prices out of Brazil," says an industry source. Another trader says that no activity has been done with Brazil at the new prices, "but when activity is done, it will be at the higher levels," says the source.

Brazilian producers are feeling no pressure to sell right now, sources say, allowing them to go ahead with the price increase they have been threatening for some time now.

"There is some decline in crop size, business has been fairly brisk, so they have no pressure to sell," says a source.

Also, processing of castor beans has been completed in Brazil, according to an industry source. Crushers have run out of both domestically grown beans and those that were imported from other countries, particularly China, says the source, meaning that supplies from here on in will be limited.

LINSEED OIL — The market for linseed oil is quiet at the moment, with most of the regular buyers having completed their purchasing during the recently ended contracting period. "All of the oil was either sold or put into storage," says an industry source, who adds that he is now seeing slow linseed oil activity.

The seasonal slowdown of the paint industry is largely responsible for the slackened demand for the oil, sources say. "Currently, the best volume is going to printing ink and hardboard producers," says a source.

The volume of available oil is said to be on the low side, indicating that the price is unlikely to fall in the near future, despite slowed buying interest. Oil levels are remaining low even as meal demand is strong, being fed by a limited supply, according to a source.

"There's not a lot of oil, not a lot of meal — it's a pretty well disciplined market," says

Continued on Page 13

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Chemical Finance

SmithKline Slates Big Buyback of Shares

SmithKline Beckman Corporation, the diversified pharmaceutical company headquartered in Philadelphia, is planning a big buyback of its shares in what is called a "Dutch" auction. Depending upon bidded prices, the sale could total anywhere between 5 million and 15 million of the company's 76,043,109 shares outstanding.

Shareholders electing to tender their shares must do so by designating a price within the range of $86 to $96 per share. SmithKline will review the tenders, and, subject to the terms of the offer, the company will select a price from this range and purchase tendered shares at or below that price.

This special program continues a program of share repurchases that the company has been conducting since January 1984, stated Henry Wendt, SmithKline's president and chief executive officer.

Warner-Lambert to Issue $100 Million Notes

Warner-Lambert Company, Morris Plains, N.J., will issue $100 million of 7⅛ percent notes due December 1, 1993, priced at par, under the company's existing $200 million shelf registration. Proceeds will be used for general corporate purposes. Co-managing the notes will be Bear Stearns & Co., First Boston Corporation, Goldman Sachs & Co. and Morgan Stanley Incorporated.

British Petroleum Seeks Tokyo Stock Listing

British Petroleum Company Plc is planning to apply for the listing of its common stock on the Tokyo exchange. The formal listing application is expected to be made in the first quarter of next year, following publication of British Petroleum's results for 1986.

Subject to approval by the Tokyo Stock Exchange and the Japanese Ministry of Finance, the listing would be effective by the middle of 1987. BP's shares of American Depositary Receipts are already listed in the UK, the US, Canada, the Netherlands, Germany, France and Switzerland.

Sterling Drug to Purchase Up to 2 Million Shares

Sterling Drug, Inc., New York, has authorized the purchase of up to 2 million of the company's common shares, to be used in conjunction with various employee benefit programs and for other corporate purposes. The company has approximately 59 million shares outstanding. Morgan Stanley & Co. will assist Sterling with the purchases.

Hoechst-Celanese Merger Delayed on Antitrust

American Hoechst Corporation and Celanese Corporation have both received requests for additional information from Federal Trade Commission under the Hart-Scott-Rodino Antitrust Improvements Act with respect to the tender offer by Hostachem Acquisition Incorporated, a wholly owned subsidiary of American Hoechst, for all of Celanese's outstanding shares of common stock, convertible preference stock and 7 percent second preferred stock.

Under FTC rules, the purchase of shares by Hostachem may not take place until 10 days after America Hoechst has substantially complied with the FTC request. Both companies said they are in process of complying with the FTC request.

Uniroyal Announces Payment on First Preferred

Uniroyal Inc., New York, said that holders of shares of Uniroyal first preferred stock would receive a final distribution of $1.08 per share, comprising the sum of $1.00 per share plus accrued but undeclared dividends from 1986 earnings of $.8 per share. The record date for the distribution will be December 5, and payment will be made as soon as practicable, the company stated.

Uniroyal also announced that it is redeeming its 5½ percent convertible subordinated debentures due February 15 at 101.25 percent of their outstanding principal amount. The payment date is expected to be December 18.

As previously announced, a regular dividend of $2 per share on first preferred stock from 1985 earnings will be paid on December 24 to shareholders of record on December 5.

ImmunoGenetics Posts Strong Third Quarter Gains

ImmunoGenetics, a biotechnology firm headquartered in Vineland, N.J., said its revenue increased 15 percent to $4.9 million, and operating profit more than doubled for the quarter ended September 30, reflecting the continued strength of its core business operations in poultry vaccines and veterinary pharmaceuticals. Net income for the quarter was $282,419, or 4 cents per share, as compared with $37,833, or one cent, in the 1985 period.

Dr. Edward B. Hager, chairman and CEO states that the company is nearing the completion of a major restructuring program that involves exiting from the red meat industry, strengthening existing core operations in poultry vaccines and veterinary pharmaceuticals and expanding into human and veterinary specialty pharmaceuticals.

Symbiotics Raises Revenue, Cuts Loss

Symbiotics Corporation, of San Diego, Calif., one of the top developers and manufacturers of monoclonal antibodies, boosted its second-quarter revenues more than six times to $1,554,454 from $147,425 a year earlier, while its net loss in the quarter (ended September 30), was sharply reduced to $20,602 from $148,259 last year.

During the quarter, Synbiotics completed a secondary public offering of common stock yielding net proceeds of $5.6 million which will be used to accelerate the introduction of diagnostic products for humans, stated Edward T. Maggio, president and chief executive officer.

Merck Declares Common Stock Dividend

Directors of Merck & Co., Rahway, N.J.-based pharmaceutical and chemical company, have declared a quarterly dividend of 55 cents per share on the company's common stock, payable January 2 to stockholders of record at the close of business on December 8. The amount of the dividend reflects the stock split that was effective in May of this year.

Alcan to Redeem Sinking Fund Debentures

Aluminum Company of Canada, Montreal, has given notice of redemption on December 29 of all of its outstanding 9¼ percent sinking fund debentures due March 1, 1998. These debentures, denominated in US dollars, are listed on the New York Stock Exchange.

OILS, FATS & WAXES

the source. This situation is expected to remain until the first of the year, when crushing facilities tend to see a seasonal pick-up in activity.

OLIVE OIL — The price for Italian B-grade olive oil has fallen off, down to the currently quoted level of $5.35 per gallon, in drums. Edible Spanish olive oil is still quoted at $8.00 per gallon, although traders say that they are beginning to see signs of weakness in the market.

One dealer attributes the weaker pricing to a stronger US dollar, while another says that recently introduced subsidies given by the Common Market to Italian and Spanish exporters are responsible.

Demand in the US continues to be slow, with one source noting that consumers buying for frying purposes are purchasing the less expensive soybean and cottonseed oils.

Some positive effects can be seen in the demand picture, says another source, from recent advertising campaigns emphasizing the healthful aspects of olive oil, including low cholesterol and ease of digestibility.

MISCELLANEOUS

COCOA BUTTER — The spot price for cocoa butter is quoted at $2.05 per pound. Domestic demand is said to be down presently, contributing to the weakened pricing. The fall-off in demand is associated with the end of the holiday buying season for many companies.

Cocoa butter pricing is falling with that of cocoa beans, according to an industry source. The West African crop is proving larger than had been expected to be, the source says, with prices to ease down.

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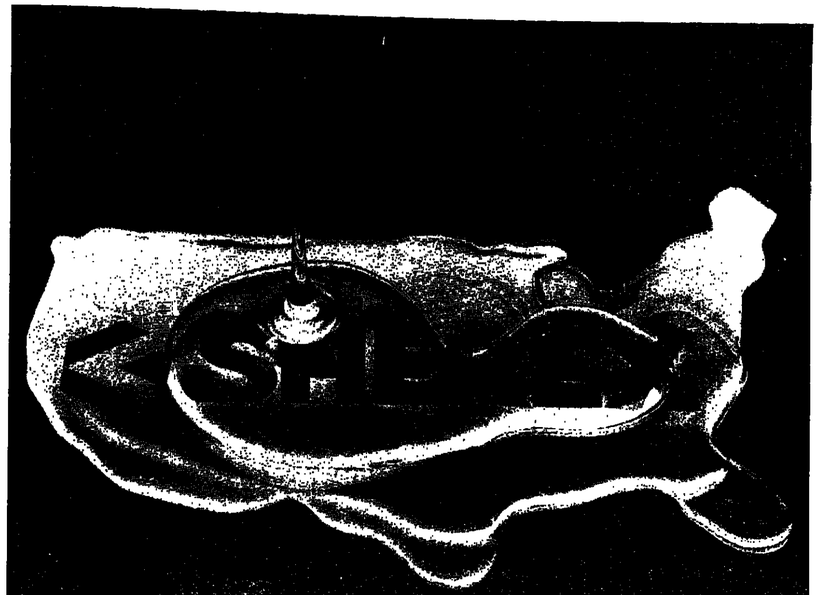

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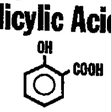

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AROMATIC ORGANICS

Phenol Discord

Continued from Page 3

October and November, says one producer; those failures are said to have made January 1 an important date for phenol producers. "Our margins have been squeezed pretty badly," comments one.

Producers say that the low phenol price in the US has discouraged imports of material this year, which have been flowing at only a fraction of the 1985 rate.

Exports have been moving at a moderately heavier clip than last year, and have been particularly strong since July. The falling value of the US dollar is said to have been contributing to these trends.

Phenol production, according to the latest International Trade Commission figures, declined from 736 million pounds in the second quarter to 698 million pounds in the third quarter, a 5.2 percenty drop. It is observed that the industry experienced a fair amount of downtime during the latter part of the third quarter.

BTX — Shell Chemical Company increased its benzene contract pricing for December 1 by 5c. per gallon, to 92 c. per gallon from 87c. per gallon. This equals the level reported the previous week for Exxon Chemical Americas. Standard Oil Company has a 95c. per gallon posting.

The spot benzene market firmed up last week to between 93c. and 93½c. from 92c. per gallon the previous week. Should spot pricing continue to move upward, another round of contract adjustments is believed likely at mid-month. All of the above postings involve temporary voluntary allowances off considerably higher list prices.

"There is plenty of demand, and the market seems to perceive a shortage" of supply, comments a source in explaining the upward price trend. Much of this is tied to Exxon's production problems which have compelled the company to buy substantial amounts of material.

It is pointed out that aromatics pricing, particularly benzene, is "inordinately bullish" relative to crude oil and gasoline values.

The spot toluene market is quoted at 70c. per gallon, unchanged from the week before. It is said that neither supply nor demand are strong. The spot xylene market is quoted between 76½c. and 80c. per gallon.

BENZOYL CHLORIDE — Velsicol Corportion says that, effective immediately, it is raising off-list pricing for tanktrailer and tankcar peroxide-grade benzoyl chloride by 5c. per pound on spot material and as contract terms permit.

The company's list pricing holds steady at 63½c. per pound, as does pricing on drum quantities. A spokesman attributes the off-list adjustment in part to higher labor and waste disposal costs.

Occidental Chemical Corportion, the other domestic producer, increased its bulk off-list pricing by 5c. per pound November 17. CdF Chimie, North America, the primary supplier of imported material says it "will see how the market responds" to these moves.

One industry source says there has been some price erosion in the market this year related at least in art to CdF's marketing efforts. Producers say that demand for benzoyl chloride has grown at a 2 to 3 percent rate.

CYCLOHEXANE — In accordance with the industry-wide pricing formula, the 1c-per-gallon December 1 benzene contract price hike translates into a 4.125c. per gallon increase in cyclohexane pricing to a level of $1.05025 for most producers. At least one

PRICES TRENDLINES

WEEK ENDING NOV. 28, 1986

CHANGES/UP
None

CHANGES/DOWN
None

AROMATICS INDEX

The Aromatic Organics Index reflects the prices of 14 representative materials in this sector and the quantity of each produced in 1985.

Nov. 28, 1986	167.84
Nov. 21, 1986	167.84
Oct. 31, 1986	167.84
Nov. 29, 1985	167.84

Chemical Prices Start on Page 36

producer's posting is 1c. per gallon lower.

In the market during November there reportedly were some discounts of approximately 2c. per gallon granted by at least one producer. Producers differ in assessment of the discounting's extensiveness.

"Apparently the industry met it," says one observer, while another comments that "we are not having trouble selling material" at the higher price. The activity is attributed to producers' efforts to position themselves favorably on a volume basis for contracts entering the new year.

Although producers say that domestic demand has been strong in recent months, the latest International Trade Commission figures record an 18.3 percenty drop in production from the second quarter to the third. The dropoff is attributed primarily to the idling of E.I. du Pont de Nemours & Co.'s 50-million-gallon-per-year Corpus Christi, Tex. plant in July, and Phillips Chemical Company's 90-million-gallon-per-year Sweeney, Tex. swing facility in May.

In addition, at least two producers experienced minor production outages during the period, exports tailed off by 19 percent, and inventories are said to have been kept at low levels. Phillips says it expects to restart the Sweeney plant around mid-month.

STYRENE — Fina Oil & Chemical Company says it has raised styrene prices by 2c. per pound, effective today, December 1. The new price schedule lists styrene at 30 cents per pound, less a 4c. temporary voluntary allowance.

Fina's action follows by one week a widespread 5 cents per gallon contract benzene price increase launched for December 1. In that action, benzene contract prices were hiked to 92c.-95c. per gallon.

Benzene producers cited tight supply and strong derivative demand, particularly for styrene, as the factors contributing to the price increase. "Styrene producers are all running full blast.

They need the benzene, are able to pass through the higher pricing, and are taking as much (benzene) as they can get their hands on," one benzene trader commented at the time (CMR, 11/21/86, p. 13).

Since August, benzene prices have run up 15c. per gallon and styrene contracts have firmed 5 cents per pound prior to Fina's announcement.

One analyst notes that styrene selling prices hopped from an average of 30½c. per pound in September to 23½c. in November.

However, he also notes that foreign styrene prices have also attracted a new flood of imports this Fall.

PRICE HIGHLIGHTS

AROMATICS IN OCTOBER

		CONTRACT (US $)	SPOT (US $)
Aniline	lb.	.33-.35½	.28-.31
Benzene	gal.	.87-.90	.85-.92
Cumene	lb.	.14¾-.14¾	.14¾-.14¾
Cyclohexane	gal.	1.0090-.9990	N.A.
Phenol	lb.	.20-.22	.19-.20
Styrene	lb.	.23-.24	.21-.22
Toluene	gal.	.68-.70	.68-.70
Xylenes, mixed	gal.	.80	.78½-.80

Aspartame Wins

Continued from Page 5

six-month clinical studies funded by the company raised no new health concerns.

Robert Gelardi, executive director of the Calorie Control Council representing makers and suppliers of dietary foods, called the petition "totally unwarranted," asserting it is "just the latest in a series of flawed attempts that have been previously made by the Community Nutrition Institute."

In another development, FDA announced the approval for the use of aspartame in four major new food and beverage categories.

According to Nutrasweet Company president Robert B. Shapiro, "These new categories will give consumers a wider choice of great-tasting products that are nutritious, sugar-free and low in calories. These are products the entire family can enjoy throughout the day," said Shapiro.

Among the new products which can be made available under the category approvals are:

- Refrigerated juices in ready-to-drink, concentrated and frozen packages. Coke Foods, division of The Coca-Cola Company, and Tropicana Products, Inc., a division of Beatrice, submitted applications in this category.
- Ready-to-eat frozen desserts on a stick, such as fruit and diary bars, frozen puddings and gelatins. Coke Foods and Tropicana again submitted petitions in this category.
- Breath mints submitted by Shaklee Corp.

"We are working closely with our customers to ensure that dozens of consumers' favorite products are readily available," Mr. Shapiro says.

Hazardous Waste

Continued from Page 7

Chemical was responsible for a large proportion of the hazardous wastes taken to the site.

The decree requires Olin Hunt to carry out the closure of the site and related post-closure work under specifications contained in federal environmental laws. Such requirements normally include construction of a cap on the contaminated area to prevent the spread of pollution.

Until the new water system is built, Olin Hunt is required by the decree to install activated carbon filters for all residences whose drinking water is affected by hazardous wastes from the site.

Olin Hunt also is required to carry out a comprehensive groundwater remedial investigation/feasibility study to determine the scope of contamination of the groundwater plume beneath the site.

The Federal government estimated that the work to be performed by Olin Hunt will cost the company at least $2 million. This money is in addition to the $3.8 million escrow fund.

The state of Rhode Island also filed a complaint earlier against these same 51 defendants as well as 36 defendants not named in the federal suit. The federal and state governments, saying they had obtained a proposed consent decree with the 51 defendants, asked recently that the complaints be consolidated, and the court granted the motion.

Other defendants named in the decree include Ciba-Geigy Corp., Monsanto Company and Chemed Corp.

Brazil Mulling

Continued from Page 7

1990's, would include a new 300,000-ton-a-year ethylene facility, together with downstream units for linear low-density polyethylene (180,000 tons) and polyvinyl chloride (160,000 tons).

Petroquimica Uniao's naphtha-based cracker at Capuava, Santo Andre has capacity for 360,000 tons per year of ethylene. Remaining naphtha-based ethylene capacity in Brazil belongs to Copesul (Petroquimica do Sul), the third of Brazil's "petrochemical poles," which has a 420,000-ton-a-year unit at Triunfo. Some 200,000 tons of additional ethylene is based on ethanol.

It is believed at least one more ethylene complex will be needed in the next decade to serve fast-growing petrochemical and downstream markets in Brazil. The industry has been hobbled by lack of investment in recent years, despite above average growth in the overall economy.

Acrylic Sheet Correction

A previous report (CMR, 11/24/86, pg. 4), erroneously indicated Rohm and Haas Company would use its proprietary melt calendaring (MC) process at a new acrylic sheet plant in Matamoros, Mexico. The plant, which is due on stream the first quarter of 1987, will use the cell casting process.

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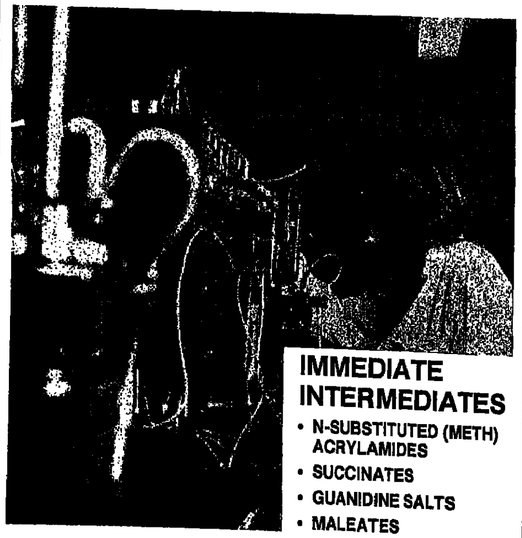

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Toxic Chemical Tests

Continued from Page 8

mon attributes, such as the basic structure within their cells. This, for example, is the reason why the nerves of worms communicate in the same way as human nerves.

During the Battelle conference, speakers identified four major areas for development of nonmammalian test systems and gave technical reviews of each. The speakers and their corresponding topics were as follows:

- Dr. Frederick De Serres, National Institute of Environmental Health Sciences, who discussed "Genetic Toxicology".
- Dr. John Couch, U.S. Environmental Protection Agency, who spoke on "Carcinogenesis".
- Dr. Gary Kimmel, U.S. Environmental Protection Agency, who examined "Developmental Toxicology".
- Dr. Ellen Silbergeld, Environmental Defense Fund, who talked on "Neurotoxicology."

In relation to these major areas of endeavor, Dr. William Farland of the EPA and Dr. Robert D'Amato of Procter & Gamble addressed toxicologic considerations concerning the use of alternative testing from the regulatory agency and industry perspectives, respectively.

Dr. Farland, director of the carcinogen assessment group at EPA's Washington headquarters and workshop co-chairman, cited the evolution in the risk assessment process used in the federal sector and stated, "Data from alternative test systems can play a large role in the identification of potentially hazardous compounds and should be taken into account in articulating the weight of evidence underlying the characterization of human risk. Regulatory decision makers can make well-informed judgments regarding possible regulatory action only if all of the available information is considered and the strengths and limitations of the information evaluated."

"Research is now needed to design and implement programs that can validate these alternatives as scientifically sound approaches that will be accepted by the regulatory agencies such as the Food & Drug Administration and the Environmental Protection Agency," noted Dr. Barry Goss, manager of the Environmental Sciences D partment at Battelle's Columbus Divisi and co-chairman of the workshop. "T should include developing extensive da bases on selected compounds by constructi comparative experiments using alternati species."

Dr. Farland, director of the carcinogen assessment group at EPA's Washington hea quarters and workshop co-chairman, cit the evolution in the risk assessment proce used in the federal sector and stated, "Da from alternative test systems can play large role in the identification of potentiall hazardous compounds and should be take into account in articulating the weight of evidence underlying the characterization human risk. Regulatory decision makers ca make well-informed judgments regarding possible regulatory action only if all of th available information is considered and th strengths and limitations of the information evaluated."

Bhopal Disaster

Continued from Page 5

toxic chemicals into the Rhine.

The report says an internationally agreed list of hazardous chemicals and threshold levels should be prepared to identify facilities worldwide which produce, use, store, transport or dispose of substances in quantities sufficient to cause a serious risk, either immediate or delayed, to persons inside or outside the facility in the event of an accidental release.

Management should notify the relevant government authorities, trade unions and emergency services with information indicating that the company has taken "all possible steps" to prevent major accidents and limit their consequences, the report says.

It also says new plants should be designed and existing plants modified to minimize the possibility of a release of hazardous chemicals. In addition, the report advises that new potentially hazardous installations should not be sited in heavily populated areas or where prevailing winds or other industrial facilities could increase the hazard.

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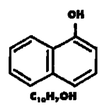

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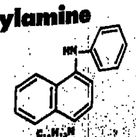

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Methylene Chloride

Continued from Page 3

used in various industrial processes, food preparation and agriculture. More than one million workers are estimated to be exposed, with the greatest exposure occurring in metal degreasing.

Last week's ANPR follows the issuance of guidelines by OSHA last Spring on controlling worker exposure to DCM while the agency deliberated on whether changes were needed to its mandatory standard.

The action also coincides with moves by Environmental Protection Agency, Food and Drug Administration and Consumer Product Safety Commission, among others, to greatly reduce the use of the chemical. The National Institute for Occupations Safety and Health has recommended that worker exposure to DCM be reduced to the lowest feasible level.

Dr. Paul A. Cammer, president of the Halogenated Solvents Industry Alliance (HSIA), said the members of his organization welcome the agency's action. HSIA represents about 150 companies involved in the manufacture, distribution, recycling and use of chlorinated solvents, including DCM.

"HSIA member companies have been recommending for some time a 100 ppm threshold limit value (TLV), which is in agreement with the 8-hour time-weighted average TLV currently recommended by the American Conference of Governmental Industrial Hygienists," Dr. Cammer said.

"An important aspect of the ANPR," Dr. Camer continued, "is OSHA's announcement that methylene chloride did not pose sufficient risk to warrant the issuance of an emergency temporary standard, as requested by the United Auto Workers.

"We disagree, however, with OSHA's current approach of relying on the NTP mouse study as a basis for human health evaluation. The most recent scientific data clearly show that mice and humans differ greatly in how they metabolize and would be affected by methylene chloride. OSHA needs to take into account this new information before reaching any conclusions."

Another part of the ANPR where HSIA disagrees with OSHA's approach is the exposure assessment. "It is clear," said Dr. Cammer, "that where OSHA lacked actual exposure data, it assumed the maximum allowable level of 500 ppm as the estimate of human exposure. This assumption greatly overestimates the actual exposures."

OSHA is seeking the following information on methylene chloride:

—potential health effect, permissible exposure levels, production and control systems, substitution availability, protective equipment and respirators, exposure monitoring, worker training, and medical surveillance; control measures and benefits, and environmental effects;

—also impact on small entities, duplicating/overlapping/conflicting rules, financial and economic profiles, production and control systems, and potential modifications to such systems.

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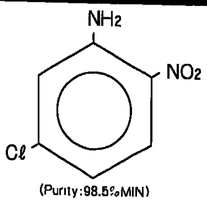

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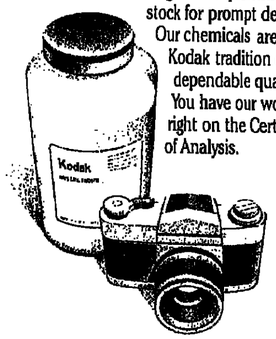

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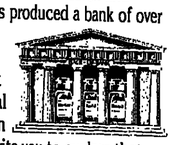

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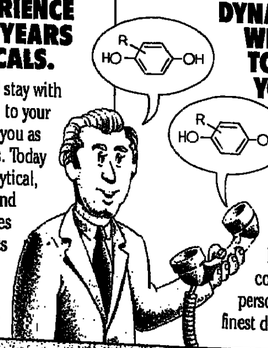

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ALIPHATIC ORGANICS

Ethylene Price Hikes Fail to Follow Derivatives

Ethylene prices remained unchanged in November, despite firmer prices for all its major derivatives. Sources say November contract settlements averaged 14½ cents per pound on the Texas Gulf Coast, the same price as October.

"Three months in a row of ethylene price increases was not likely," one producer commented, "not with raw material costs flat- to down." Ethylene sellers gained "hard fought" half-penny price increases in both September and October, another source says.

The producer says supply and demand have been in "reasonably" good balance, but the market is not tight enough to force higher prices. Feedstock costs have been mainly flat, sources say. According to Hugh Pylant, Pace Consultants, Houston, ethane prices may be one-half a cent per gallon higher now than in September, but propane and naphtha costs are essentially unchanged. Gas oil prices have firmed with the growing demand for heating oil, but producers have been shifting away from it anyway.

As a result, ethylene producers can merely watch as the olefins' major derivatives firm in price. Mr. Pylant notes that liner grade low density polyethylene prices have surged from an average of 24¼ cents to 28½ cents per pound since September, while high density polyethylene selling prices have risen from 29½ cents per pound to 32½ cents in November. In addition, styrene prices gained an average of 3 cents in the past two months, ethylene oxide prices have risen 1 cent to 2 cents per pound, and polyvinyl chloride prices have gained 2 cents in two months.

Demand has been rising for these products this year as well. Mr. Pylant projects that total polyethylene production will rise 600 million pounds this year.

VINYL CHLORIDE TO INCREASE

Vinyl chloride output will also increase 600 million pounds this year, while styrene production will jump almost 400 million pounds, Mr. Pylant says. As a result, he projects that ethylene production will reach 32.2 billion pounds this year, up smartly from last year's 29.6 billion pound total.

Several sources commented that a few producers in the Texas Gulf were more concerned with maintaining market share than with boosting ethylene prices. Several major facilities took turnarounds earlier this fall, and one producer says "some producers were afraid of losing market share while their plants were down." A market observer adds, "Some producers are concerned about moving volume, and their short term cash-flow. The buyers know this, and are exploiting it to the hilt."

At present, nearly all operational ethylene plants in the US are on-line. Amoco Chemicals closed a one-billion pound unit in Chocolate Bayou, Tex. in mid-November. The company says the unit was closed to work inventories down, while some maintenance work is done. The unit is due back on line in mid-December.

Most of the excess material that has contributed to keeping ethylene prices down is concentrated in the Texas Gulf Coast, one observer says. By contrast, he says plants in Louisiana are running full out, and over 1 billion pounds of ethylene a year flow from Texas to the Mississippi River. As a result, the ethylene market price on the River is a penny to a penny-and-one-half higher than the 14½ cent per pound average quoted in Texas.

Looking ahead, sources say ethylene prices will probably remain flat through December, but producers will launch a major increase for January. One source says low ethylene inventories (1.2 billion pounds as of September 30), and a good supply-demand balance will prompt producers to shoot for a large increase regardless of the feedstock cost situation.

PRICES TRENDLINES

WEEK ENDING NOV. 28, 1986

CHANGES/UP

None

CHANGES/DOWN

None

ALIPHATICS INDEX

The Aliphatic Organics index reflects the prices of 20 representative materials in this sector and the quantity of each produced in 1985.

Nov. 28, 1986	222.80
Nov. 21, 1986	222.80
Oct. 31, 1986	222.80
Nov. 29, 1985	222.80

Chemical Prices Start on Page 36

BUTADIENE — Prices for this olefin definitely bottomed out at 9c. per pound for contracts in October and November, and are now showing signs of improving. Several sources say the spot price for butadiene has climbed above contract levels and is nearing 10c. per pound. However, the market is so snug, that sources say little material is available for spot purchases.

According to one source, Exxon, which does not publish its prices, is asking 12c. per pound for butadiene in December. While it is unlikely prices will climb this high, producers may be able to move contract prices up to 10c. per pound.

One source says 11c. per pound "should be a supportable floor price" for butadiene. By this, he means an 11c. price would better indicate the snug supply-demand conditions prevailing in the market, while remaining low enough to prevent a new flood of imports.

Meanwhile, propylene prices remained unchanged in November at an average price of 9½c. per pound for chemical grade material. The refinery grade market remains snug and prices are quoted at 8c. to 8½c. per pound, unchanged for the month. A continuing shift towards lighter feedstocks at olefin plants though, promises to cut into propylene (and butadiene) supplies in the fourth quarter, and may lead to tighter propylene availability in early 1987 and firmer prices.

CAPROLACTAM — Responding to a very tight supply-demand balance in the caprolactam market, Nipro, Inc., Augusta, Ga., says it will boost all off-schedule prices for the nylon 6 precursor by 1½c. per pound, effective January 1.

Output of caprolactam this year is expected to nearly match the industry's rated capacity of 1.09 billion pounds (CMR 10/13/86). All three producers, Nipro, BASF, and Allied report that their facilities have been run at full capacity for most of the year. It is this market tightness, a Nipro official says, that prompted his company to hike off list prices. The current market price, he says, ranges from 62 cents per pound to 70 cents per pound, depending on contract sizes.

The Nipro official says that the company made its pricing decision prior to higher contract prices announced for benzene on December 1. Cyclohexane, the raw material for Nipro's caprolactam, is tied to a pricing for-

PRICE HIGHLIGHTS

ALIPHATICS IN NOVEMBER

		NOV. (US $)	OCT. (US $)
Butadiene	lb.	.9	.10¼
Ethylene	lb.	.14½	.14½
Ethylene Glycol	lb.		.18½
Methanol	gal.	.28	.27-.28
Propylene	lb.	.9¼-.9¾	.9½
Vinyl Chloride	lb.	.16-.16½	.15½-.16

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ALIPHATICS

mula for benzene. Therefore, higher benzene prices translate into higher cyclohexane prices. Higher raw material costs would certainly give further impetus to firmer caprolactam prices, especially in light of the market tightness.

ORGANIC PEROXIDES — Akzo Chemie America, Chicago, says it will raise the price of certain organic peroxides by 5 percent, effective January 1.

The action will raise the price of "trigonox 29-B75" peroxyesters from $4.41 per pound to $4.63, while "trigonox BPIC" prices will increase from $7.00 per pound to $7.35; "trigonox F-C50" will increase from $2.31 per pound to $2.43; and "trigonox 97-C75" prices will rise from $5.04 to $5.29 per pound.

At the same time, Akzo will also boost silicone pastes, dry benzoyl peroxide formulation and benzoyl peroxide pwoder grade prices by 5 percent. The new schedule is: "cadox TS-50," $12.60 per pound; "cadox BS," $7.79 per pound; "cadox PS," $17.42 per pound, "Cadox BFF-50," $2.63 per pound; "cadox BTA," $2.00 per pound; and "cadet BPO 78 powder," $9.20 per pound.

Akzo also posted the price of solid peroxydicarbonates by 5 percent. The new price for "perkadox 16" is $10.50 per pound.

All quoted prices are for orders of [illegible] pounds or more.

PROPIONATES — Southland Corpo[illegible]tion's Chemical Division has established [illegible] new price schedule for both calcium a[illegible] sodium propionates. The company h[illegible] dropped its uniform price quote, and no[illegible] lists prices according to quantity, and sh[illegible] differentitates between material sold i[illegible] drums and in bags.

Effective January 1, 1987, the new sched[illegible]ule for "Sta Fresh C," calcium propionate and "Sta Fresh S," sodium propionate will be as follows; shipments for both products in quantities under 2,000 pounds will be billed[illegible] 56c. per pound for 50-pound bags, and 42c per pound for product shipped in 150-pound drums. For 10,000 pound orders, the new listing is 54c. per pound, while material shipped in drums is quoted at 62c. per pound. Bag orders of 20,000 pounds is quoted at 52c per pound, while drum shipments are listed at 59c. per pound. Finally, 40,000 pound orders are listed at 52c. for bags, and 58c. in drums.

All prices are f.o.b. seller's plant or warehouse. Freight is prepaid and allowed for shipments of 2,000 pounds or more.

In the past, a Southland spokesman says the company quoted a uniform price of about 52c. per pound for both calcium and sodium propionate.

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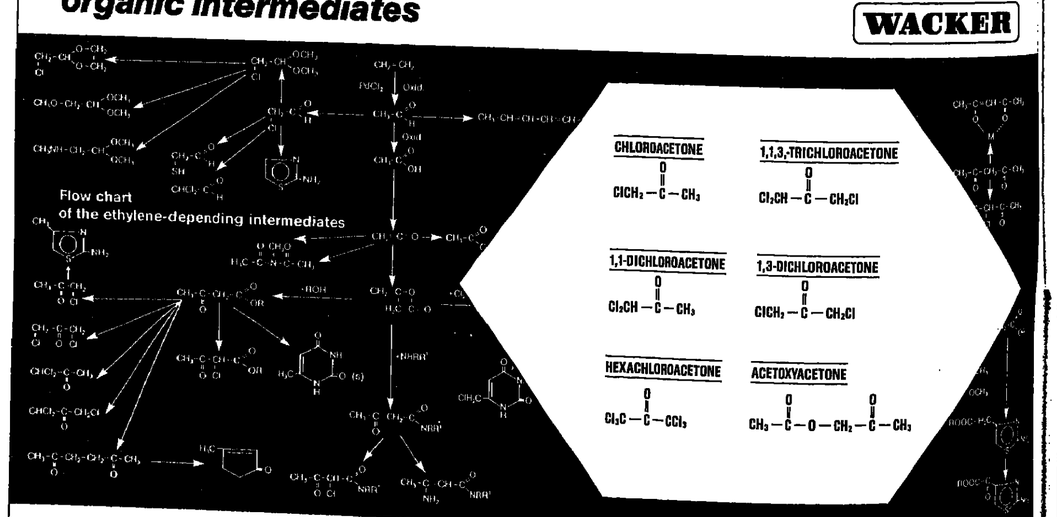

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DRUGS & FINE CHEMICALS

Chugai Raising Iodine Price; Tight Supplies Plague Market

Chugai International Corporation will be raising its iodine prices effective January 1, 1987. Other suppliers are said to be studying the move.

There is no established list price for crude iodine, but Chugai says the typical customer will pay between $16 and $17 per kilogram, up about $1.50 per kilogram. A major buyer says his suppliers have increased their prices from between $1.70 and $2 per kilogram.

Prices have been firming during all of 1986. The main reasons cited are tight supply and the falling dollar, as Japan is one of the main sources of crude iodine.

Tightness has been a problem all year, and no relief is in sight, observers say. "A worldwide shortage of iodine is expected for next year," claims one source. Japan extracts its material from brine, a byproduct of gas drilling. Gas extraction in Japan has been down this year. In the US, Dow's pullout this year has also had an effect on supplies. One source thinks that the effects will be greater in 1987, when none of Dow's material will remain.

Adding to tightness in 1986 was the Chernobyl nuclear disaster. To prevent radioactive iodine released by the explosion from entering the thyroid, one must saturate the organ with "regular" iodine, usually potassium iodide.

Sources differ on how much extra demand this has caused. One source calls the original estimate of 1 to 2 million pounds an exaggeration, but others find that figure to be correct, or even too low. This product has primarily been going to Russia, but some of it is going to neighboring countries, which are also concerned about the effects of Chernobyl.

CONTRAST MEDIA

Also contributing to tightness, say sources, are the new generation of contrast media. This market has seen healthy growth, and is commanding increasing amounts of crude iodine. The demand is said to be largest in Europe, although the US also is seeing substantial growth.

There are other factors which may ease the market, however. Recently, General Services Administration was given approval by Congress to receive and consider offers, beginning December 9, by two ferroalloy processors to purchase excess iodine as payment material. The two processors are Macalloy Corporation and Elkem Metals Company. The minimum bid will be 1,000 pounds, and no more than 200,000 pounds may be sold in any one month. Successful bidders will have the dollar value of the iodine applied as a debit against credits earned or to be earned by the purchasers for supplying material or services. After December 9, GSA will be allowed to make an award whenever an acceptable offer is received.

Also, a Food & Drug Administration ruling concerning the amount of EDDI (ethylenediaminedihydrochloride) went into effect September 1. The intention is to reduce the trace of iodine in milk and other diary products. The new daily maximum per person is 10 milligrams. Previously, there was no official limit, but industry adopted 50 milligrams as an unofficial limit.

The Bureau of Mines estimates that animal feed comprises 25 percent of the iodine industry's demand, so the reduction would mean a 20 percent cutback in consumption (assuming other demand remains the same). However, some iodine industry observers find the Bureau's 25 percent estimate too high, and say the ruling will have only a minor effect on supply.

The iodine industry continues its battle with the US Customs service. Customs randomly selects iodine shipments for testing, to determine whether it is resublimed (99.8 percent purity or greater) or crude. Resublimed iodine receives a 6.2 percent duty. Crude has no duty.

Iodine sources claim that, with current

PRICES TRENDLINES

WEEK ENDING NOV. 28, 1986

CHANGES/UP
Caffeine, $1 per lb.
Sodium erythorbate, 15c. per lb.

CHANGES/DOWN
None

DRUGS INDEX
The Drugs & Fine Chemicals Index reflects the prices of 10 representative materials in this sector and the quantity of each produced in 1985.

Nov. 28, 1986	211.16
Nov. 21, 1986	211.16
Oct. 31, 1986	211.16
Nov. 29, 1985	211.16

Chemical Prices Start on Page 36

DRUG & FINE CHEMICAL IMPORTS: SEPTEMBER

CENSUS BUREAU REPORTS ON THE TOP DRUGS

		SEPTEMBER		AUGUST	
		QUANTITY	$ VALUE	QUANTITY	$ VALUE
Acetaminophen	lbs.	337,283	784,304	426,431	1,000,445
Benzenoid drugs, n.s.p.f.	lbs.	211,176	1,136,804	108,073	1,595,983
Bicine	oz.	131,271	262,948	—	—
Caffeine	lb.	428,649	1,324,844	573,710	2,280,482
Citric Acid	lb.	3,176,106	1,910,625	3,878,940	2,442,417
Cream of Tartar	lbs.	233,351	139,799	289,531	169,386
D-pantothenic acid	lbs.	178,111	648,483	196,070	746,782
Iodine, crude	lbs.	306,979	1,676,812	205,238	1,159,882
Monosodium glutamate	lbs.	5,585,075	3,066,430	5,464,463	3,566,412
Niacin, pharmaceutical grade	lbs.	277,781	506,850	132,276	308,283
Penicillin G salts	lbs.	158,071	2,020,030	195,086	1,333,596
Penicillin n.s.p.f.	lbs.	1,691	504,984	10,899	735,026
Phenylephrine HCl	lbs.	1,102	80,005	2,208	137,068
Potassium sodium tartrate, (Rochelle Salts)	lbs.	117,181	77,034	95,160	38,609
Quinine and its salts	oz.	373,719	1,296,853	588,988	1,972,865
Saccharin	oz.	53,555	116,888	246,974	679,558
Steroid hormones, synthetic	lbs.	166,864	388,821	176,764	346,172
Sulfamethazine	gms.	1,498,579	1,042,965	1,222,925	1,067,271
Sulfathiazole	lbs.	121,474	494,043	111,553	499,885
Tartaric acid	lbs.	122,987	272,542	83,730	177,697
Vitamin A	lbs.	147,947	146,064	641,559	656,063
Vitamin B_1	lbs.	149,893	1,328,247	249,989	1,657,557
Vitamin B_2	lbs.	23,717	235,173	76,423	879,183
Vitamin B_{12}	lbs.	104,896	1,537,725	166,969	2,662,319
Vitamin C	lbs.	30,139	259,513	4,864	219,090
Vitamin E	lbs.	981,644	3,715,968	1,157,473	4,226,391
Vitamins, provitamin, etc., n.s.p.f.	lbs.	142,280	690,759	220,881	1,250,258
Woolgrease, n.s.p.f.	lbs.	11,074	103,113	11,074	103,113
	lbs.	573,596	231,587	131,486	335,203

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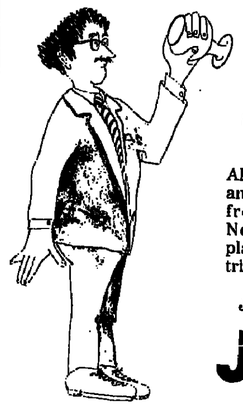

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DRUGS & FINE CHEMS

tightness, they can't afford to have any material detained.

Meanwhile, crude imports are down almost 39 percent, to 2.26 million pounds, from 3.69 million pounds. However, five times more resublimed material has come in through September, compared to last year (1.7 million pounds, compared to 339,000 pounds). One observer claims the same amount of iodine is coming to the US, but the government is classifying more of it as resublimed. Together, this year's crude and resublimed iodine imports are almost the same as last year's total.

ENZYMES — The price of enzymes used in starch processing have been increasing in 1986 because of currency fluctuations and a "truce" of sorts in the price war which had raged since the early 1980's.

Since May, Miles Laboratories, Novo Laboratories and Enzyme Technology Corporation have all raised prices for either glucoamalyase or alpha amylase, or both. The most recent increase, for both products, came with Novo's late-October announcement of its 1987 contract prices.

Novo's prices stand at $3.50 per liter for glucoamylase and $1.75 per pound for alpha amylase. Miles carries prices of $3.50 per liter for glucoamylase, $4.50 per liter for alpha amylase, and $3.25 per liter for industrial-grade glucoamylase. Miles also has two industrial-grade alpha amylase products, which cost $2.20 per liter and $4.40 per liter, respectively. Enzyme Technology, a wholly-owned subsidiary of Great Lakes Chemical Corp., prices glucoamylase at $3.50 per liter.

Despite recent increases, however, suppliers are not satisfied. "The current prices are unacceptably low," complains a source. "There's been a price war among the companies. Now, some of that is relaxed. Everyone would like to see prices going back up." Another source agrees, commenting that "beginning in 1983, prices began to decline rather dramatically, and continued every year," until 1986. This year, say suppliers, profitability became too low to justify a price war.

Currency fluctuations have added more pressure to the market, claim suppliers. One source notes that his company suppliments its domestic material with imported product, and that the falling dollar further exacerbated that market.

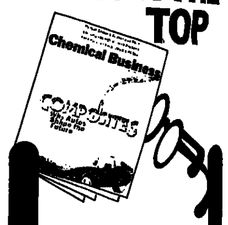
One source points out that when his company's prices peaked in the early 1980's they were, on average, 1½ times greater than they were before this year's increases. Another source says that, in some cases, his company's prices halved.

Suppliers say there is still pressure for more increases in 1987. Even after contract prices are announced, says a source, spot prices will probably continue to rise. Historically, contracts are signed on a yearly basis.

Demand is steady, between 3 and 5 percent. Suppliers note that demand grew rapidly about five years ago, but has since stabilized.

NIACINAMIDE USP — Reilly Tar & Chemical has joined the list of producers hiking niacinamide USP prices (CMR, 11/3/86 p. 22). Effective immediately, Reilly's new list prices are: $6.50 per kilo for orders of 1,000 kilos and more; $6.75 per kilo for orders ranging from 250 kilos to 950 kilos; and $7.00 per kilo for orders under 250 kilos. These prices are about $1.00 per kilo higher than previous quotes, a Reilly spokesman says.

REACH THE TOP



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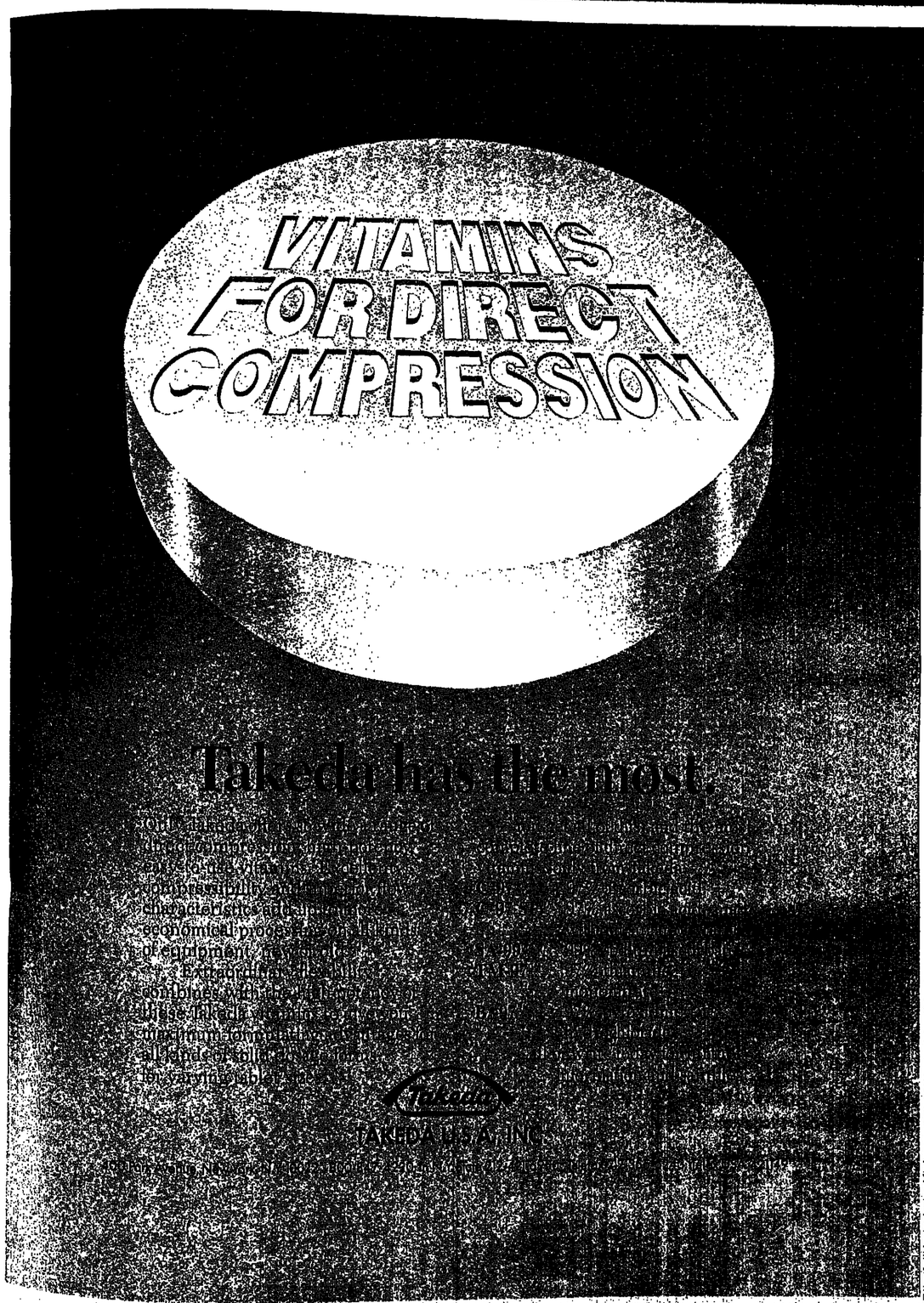

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Chemistry Labs in Academe Are Getting New, Smaller Look

By "thinking small," a Merrimack College chemistry professor and his colleagues have revolutionized the teaching of chemistry in the nation's colleges.

Dr. Ronald M. Pike, professor of chemistry at the North Andover, Catholic colleges, along with Drs. Dana A. Mayo and Samuel S. Butcher, both professors of chemistry at Bowdoin College in Brunswick, Maine, have developed the "microscale organic chemistry laboratory." Over the past five years, the three chemists reduced the scale of many classic laboratory experiments a hundredfold and some a thousandfold, using smaller quantities of chemicals and much smaller laboratory equipment — beakers the size of shot glasses, syringes instead of pipettes, flasks with a diameter less than that of a quarter, and test tubes about the length of a cigarette.

Facing the expensive and difficult redesign of overcrowded and inadequately-ventilated chemistry facilities, the three chemists began working on the concept as an alternative.

"The microscale concept reduces a college's annual cost of teaching organic chemistry by about 30 percent," Dr. Pike explained.

BHA EMISSIONS

"It dramatically reduces toxic emissions and toxic waste and virtually eliminates the danger of fire and explosions."

And Dr. Pike pointed out that the quality of chemistry instruction actually improves with students using smaller quantities of chemicals and scaled down versions of laboratory equipment.

"Students are able to do more experiments in each session, they are forced to be extremely accurate and they are required to concentrate harder. In addition, college students can now perform experiments that used to be possible only in graduate research institutions."

Despite initial skepticism from colleagues, the Merrimack College professor and his two associates scaled down hundreds of experiments. The three professors developed not only the methodology of conducting the experiments but the necessary laboratory equipment, as well. Mssrs. Pike, Mayo and Butcher have traveled around the country the past year explaining the concept at meetings of teachers, faculty and chemists.

A number of colleges and schools across the country, including Baylor, Brandeis, Notre Dame, Boston College and Villanova, have already adopted the microscale laboratory concept. Pike and his colleagues have co-authored the textbook, "Microscale Organic Laboratory," published earlier this year by John Wiley and Sons.

The three were honored last week by the Charles A. Dana Foundation in the words of the citation, "for pioneering the microscale organic chemistry laboratory — an innovation with pedagogical, public health and financial benefits that are revolutionizing the laboratory instruction of 200,000 college students a year ... (Yours is) a pioneering achievement in higher education."

API Overview On Soil Cleanup

An overview of recent research by the American Petroleum Institute on cleanup of soil contaminated by motor fuels will be presented December 3 in New Orleans by Dr. Bruce J. Bauman, a staff associate of the API Marketing Department.

The presentation will be among several research papers presented at the joint annual meeting of the American Society of Agronomy, the Crop Science Society of America and the Soil Science Society of America.

Dr. Bauman will discuss API research on new methods to decontaminate soils, including such processes as natural biodegradation of petroleum products, and stimulation of these natural methods.

Many of the components of motor fuel are biodegradable by naturally-occurring microorganisms. Research has shown that this process can be activated and increased by adding oxygen and nutrients to soil. Hydrogen peroxide, a common household product, has been shown to stimulate such microbial activity in soil, helping to prompt biodegradation of gasoline.

Another method of removing motor fuels from soil is soil venting, or drawing air through soil, giving fuel in the soil the chance to evaporate. This method is helpful in decontamination of groundwater as well as soil.

Ciba-Geigy Drug Okayed by FDA For Bone Disease

US Food & Drug Administration has approved for marketing the first synthetic human calcitonin for victims of Paget's disease of the bone, an often debilitating and deforming bone disease, according to Ciba-Geigy.

It is estimated that about 60,000 individuals in this country are currently receiving treatment, although in many cases this treatment is symptomatic rather than specific for the disease. While for many victims the disease is not so severe as to warrant treatment, for others current therapy has not been proven satisfactory.

Paget's disease is a metabolic bone disease in which the cells known as osteoclasts become overactive, causing disorderly formation of bone. Bone is normally formed by the interaction of osteoclasts, which break old bone, and osteoblasts, which form new bone.

When osteoclasts become overactive, osteoblasts attempt to keep pace and, as a result, the bone that is formed is bulky and loosely constructed. Where bone is bulky, it can compress nerves such as those that carry signals from the ear to the brain, causing problems as serious as deafness.

Indeed, some experts believe that the great composer, Ludwig van Beethoven, became deaf as a result of Paget's disease. They point to busts of the composer which suggest the presence of Paget's disease of the skull.

While deafness is a well-documented complication of Paget's disease, the more typical complications involve the weight-bearing bones, those in the hips, legs and spine.

Paget's disease typically begins to manifest itself after the age of 40. Signs and symptoms include thickening of particular areas of bone, bone pain, bowing of the bone and sensation of heat near the bone. Treatment is usually indicated when pain and/or deformity are present. Diagnosis is generally based upon X-ray examination. Left untreated, the disease can often lead to fractures and degeneration of the hip joint.

Before "Cibacalcin" (calcitonin-human for injection) was approved, there were only two available forms of therapy for Paget's disease. One, etibronate disodium, binds to bone crystal and, as a result, decreases breakdown of the bone. The problem with etibronate disodium is that it can also prevent bone from mineralizing properly. Hence, the new bone is not as strong as old bone.

In addition, because it causes impaired bone mineralization, etibronate disodium cannot be given continuously. According to product labeling, the drug must be given for periods of no longer than six months followed by drug-free intervals of three months.

The other available form of treatment is salmon calcitonin, which shares the benefits of human calcitonin but has problems not shared by human calcitonin.

Calcitonins are naturally occurring peptide hormones. They target calcitonin receptors in osteoclasts and reduce the activity of the osteoclasts. Because salmon calcitonin differs structurally from human calcitonin, the human body recognizes it as a foreign substance and commonly builds antibodies. As a result, allergies can develop or the drug may lose effectiveness over time.

Cibacalcin, however, has the advantage of being identical to the human hormone. Antibody formation, therefore, is rare; and long-term effective therapy is possible in all but a very few cases.

The most common side effects of human and other calcitonins are nausea and/or flushing of the skin after the injection. These occur in a minority of patients, are usually mild and transient and often improve over the course of treatment. Bedtime administration often minimizes these effects, as may dose adjustment.

Cibacalcin will be available in prepackaged syringes, which makes self-administration easy and practical. Each syreinge will contain a 0.5 mg dose. Initial recommended treatment will be one injection daily. Based on patient response to therapy, maintenance dosage may be reduced to injections two or three times weekly.

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Du Pont Fined On TSCA Rule

In a settlement with Environmental Protection Agency's enforcement office, E.I. du Pont de Nemours & Co. has agreed to pay $100,000 for violating the pre-manufacture notification rule of the Toxic Substances Control Act (TSCA).

The agency issued an administrative complaint in February against DuPont for manufacturing chemical substances, between November 1984 and April 1985, that were not listed on the TSCA Inventory of Existing Chemical Substances.

Section 5 of TSCA prohibits the manufacture or import of a chemical which does not appear on the TSCA inventory unless the manufacturer notifies the EPA administrator at least 90 days before manufacturing or importing the substance.

EPA says the company failed to submit pre-manufacture notifications for these particular chemical substances.

The agency says it cannot identify the chemicals involved in the case because DuPont has declared them confidential business information under section 14 of TSCA.

Uniroyal, Enichem Unit to Form Venture

Uniroyal Chemical Company, Inc., and Enichem Elastomeri SpA (a subsidiary of Enichem SpA) have agreed to form an equally owned joint venture in Europe to manufacture and market Royalene EPDM Synthetic rubber utilizing Uniroyal Chemical Company technology.

The joint venture brings together Uniroyal "Royalene" EPDM technology with Enichem's manufacturing capability in Europe. "Royalene" is a registered tradenam of Uniroyal Chemical Company.

Major uses of EPDM include automotive sponge, single-ply roofing membranes, automotive and appliance hoses, specialty hose and tube applications, impact modifiers in thermoplastic olefins as well as a variety of molded rubber products.

Existing European Enichem production facilities will be converted and expanded to produce the EPDM. Start-up is planned for early 1988 with initial capacity comparable with other major producers. The marketing efforts of the joint venture will be supported with technical service laboratories in Europe.

Biologics Rules Proposed by USDA

Department of Agriculture is proposing to establish rules for state approval of experimental veterinary biologics. The rules would allow state approval of experimental veterinary biologics shipped within the state where they are produced or out of the country.

The proposal establishes the criteria for accepting a state licensing program for veterinary biological products and manufacturers. A state would be required to identify each manufacturer and each product to be licensed by the state, and to provide a system of review and oversight.

"Recent amendments to the Virus-Serum-Toxin Act require federal and state approval before veterinary biologics researchers and license applicants can ship experimental veterinary biologics intrastate or out of the country," says Bert W. Hawkins, administrator of USDA's Animal and Plant Health Inspection Service.

"Prior to these amendments, experimental veterinary biologics in many cases could be shipped intrastate or exported without being licensed or approved by either a state or USDA," he says.

Bristol-Myers Granted Motion

Bristol-Myers Company says that a motion by McNeilab, Inc., a subsidiary of Johnson & Johnson, to set aside a Federal judge's earlier decision in favor of Bristol-Myers has been denied in the US District Court in Philadelphia.

In his written order, Judge Clifford Scott Green also granted Bristol-Myers company's motion to dismiss McNeilab's amended and supplemental complaint.

Judge Green had entered a decision on September 8, 1986, ruling in favor of Bristol-Myers Company in a lawsuit brought by McNeilab challenging advertising of the superiority of two "Nuprin" tablets over "Extra Strength Tylenol." McNeilab manufactures "Extra Strength Tylenol." Following a trial on the merits in August, the court found that McNeilab had not demonstrated that the Nuprin commercial was false or misleading and entered final judgment in favor of Bristol-Myers Company, dismissing the lawsuit.

In his earlier September 8 dismissal of the lawsuit brought by McNeilab, Judge Green said, "Because I find that two tablets is one of the authorized doses of Nuprin, I conclude that neither the Lanham Act nor the common law is violated by the commercial pointing out the superiority of Nuprin when taken in an authorized dose of two tablets."

Eastman Kodak Picks Headquarters

Eastman Kodak Company has selected Pennsylvania as the headquarters location for its Pharmaceuticals Division.

Kodak expects to relocate about 100 employees to the new location, which it expects to be operational during the third quarter of 1987. Eventually, about 300 employees will occupy this interim site.

"Kodak's long-term objective is to create a pharmaceuticals business focused on prescription products, in-vivo diagnostics, and over-the-counter drugs," says Paul Baehr, general manager and vice-president of the division. "To support this effort, it is important to locate our headquarters in an environment that has become an established center for the pharmaceutical industry."

The company expects to occupy the facility at the Great Valley Corporate Center on an interim basis. Program expansions will require the division to construct a new permanent site with many additional employees in the greater Philadelphia area in the future.

Textile Imports Hit a New High

Imports of textiles and apparel for the first 10 months of the year hit an all-time high of 10.8 billion square yards, almost reaching the record level of textile and apparel imports for all of 1985, the American Textile Manufacturers Institute reported last week.

In figures released by the Department of Commerce, imports of textiles and apparel from January through October increased 19 percent over the same period last year. Imports of textiles alone increased 24 percent during this time.

In October, textile and apparel imports reached 996 million square yards, a 7.5 percent increase over October 1985. This is the highest import level for the month of October in history.

The textile and apparel trade deficit for the first 10 months of the year reached another record level of $17.8 billion. This is a 16.7 percent increase over the same period in 1985.

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Citronella Oil Prices Increase As Availability, Imports Drop

Citronella oil prices firmed last week in light of decreased availability and estimates that material production will remain low in the near future. Consumption continues unabated, sources report, and a tighter market is predicted.

Spot prices for Chinese, Indonesian and South American citronella oil increased 10 cents to 20 cents per pound last week to $2.70 per pound, responding to greater increases for shipping prices. Quotes on current shipping prices range from $5.30 per kilo, cost and freight New York, for South American and Chinese material to $5.75 per kilo from resellers in Hong Kong and London.

"The biggest reason," says an essential oils broker, "seems to be the shortage out of China." An importer agrees, citing reports that Chinese farmers switched crops in the last year: "Local demand in China and low prices have caused farmers to leave citronella oil alone and plant higher yield items like pepper and cotton."

The oils broker also regards Chinese demand a factor in the international citronella oil pricing. "They are so low on material they must be consuming it internally because they had to renege on some contracts." Another broker says he knows of no such breaching of contracts but that less offers are coming from China: "Offers from China are so scarce they're almost impossible to get."

Another indication of lessening availability says one broker, is the low-volume level at which transactions have been made: "Sales have been done at very low levels, a rate of only 5 or 10 tons per purchase."

INDONESIAN CITRONELLA

Indonesian, or Javan, citronella oil has also been encountering problems in the US, according to industry sources, unrelated to the Chinese material but compounding the tightness of the citronella oil market.

Working against Javan citronella oil is the fact that it is already higher priced than the Chinese, South American or Ceylonese materials, causing it to be released to other countries rather than the US (CMR, 10/6/86, pg. 31). Also, according to an essential oils broker, "there has been some speculation that there's more water than normal in the Javan oil."

Another broker denies that water levels are above normal: "Since it is steam distilled, you always have a water content, but it has not varied to any great degree." Regardless of difference of opinion, he explains, offers are becoming so rare that any citronella oil on the market gets snapped up. "People are buying whatever they can get their hands on so they can run their businesses."

Imports in September, 1986 reflect the increasingly restricted availability: 142,140 pounds compared to an August total of 270,605 pounds.

Sources are in agreement that a continued lessening of availability can have an impact as early as the first quarter of 1987. Considering citronella oil is one of the largest volume essential oils with applications from pesticides to feedstocks for other essential oils, "inventories could be depleted relatively soon," says one source.

"Since fewer and fewer offers are being made," says an essential oils importer, "it remains to be seen whether availability will be able to meet demand in 1987, but the indicators suggest citronella oil will be very tight."

PRICES TRENDLINES

WEEK ENDING NOV. 28, 1986

CHANGES/UP

Allspice, Honduran, 2c. per lb.
Citronella oil, Chinese, 10-15c. per kilo
Citronella oil, Javan, 15c. per lb.
Citronella oil, South American, 45c. per kilo
Cumin seed, Turkish, 2c. per lb.
Cumin seed, 1987 delivered, 7-9c. per lb.
Eucalyptus citriodora, Chinese, 10c. per kilo
Laurel leaves, Turkish semi-select, 25c. per lb.
Litsea cubeba oil, 40c. per kilo
Oregano, Mediterranean, 5c. per lb.
Pepper, Muntok white, 3c. per lb.

CHANGES/DOWN

Cardamoma, decorticated 10c. per lb.
Cassia, Indonesian A-C, 2-7c. per lb.
Cassia oil, Chinese 85%, $7-$9 per kilo
Cloves, Madagascan/Brazilian, 5c. per lb.
Cloves, delivered, 2-10c. per lb.

PERFUMES INDEX

The Perfumes & Flavorings Index reflects the prices of 11 representative materials in this sector and the quantity of each supplied in 1985.

Nov. 28, 1986	71.00
Nov. 21, 1986	71.00
Oct. 31, 1986	71.00
Nov. 29, 1985	71.00

Chemical Prices Start on Page 36

ESSENTIAL OILS

CASSIA OIL — Cassia oil shipping prices experienced further weakening last week in the wake of reports that Chinese supplies far outweigh current demand. Prices dropped from $41 to $43 per kilo cost and freight, New York to $34 per kilo same basis.

Large inventories are still in evidence, according to industry sources, from the 1985 sales, and this has left the Chinese offers extended without takers. "Demand has not picked up demonstrably," says an essential oils importer. "Not a lot of material is being moved." Sources anticipate the cassia oil market will soften into December but then level off as demand returns.

CINAMMON BARK OIL — Sources say prices for cinnamon bark oil should firm in the next few weeks as reports of too little rainfall are considered likely to affect production. Recent spot quotes reflect market uncertainty as some essential brokers list cinnamon bark oil (60 percent cinnamic aldehyde) anywhere from $80 to $150 per pound.

The monsoon season in Sri Lanka stretches from late July through September and if rainfall during this period is insufficient then production is cut back. "When the monsoon rains finally did come," says a representative of the Sri Lankan embassy, "they came very late and very weak." He adds that coconut oil production will also suffer from this dry Summer.

An essential oils broker attributes the discrepancy in spot pricing for cinnamon bark oil less to anticipated shortfalls of material than to the wide range of quality on the market. "It depends on the quality," he says, "and the percentages of natural cinnamic aldehyde."

LITSEA CUBEBA OIL — Litsea cubeba oil shipping prices advanced last week for some of the same reasons citronella oil firmed. Prices went from $4.90 per kilo cost and freight insured to over $5.30 per kilo same basis.

"The local Chinese farmers opted out of litsea because of the low returns they had been getting," says an essential oils broker, explaining that other crops such as cotton yielded better profit margins. Another source suggests that the prices will continue to firm as the demand for litsea cubeba oil will be constant while the availability may decline.

SEEDS & SPICES

CLOVES — Spot prices for cloves from most points of origin slipped last week 5c. to 10c. per pound. Offers are reportedly being made at lower levels for 1987 delivery and the effect has been to soften the spot market.

Prices for 1987 delivery had been as high as $2.25 per pound in mid-October, but have eroded due to reports of plentiful supply to the current levels of $1.95 per pound. Spot prices fell from $2.30 per pound for Madagascan and Brazilian cloves last week to $2.25 per pound. Prices for delivery in December, 1986 have declined 10c. to $2.20 per pound.

The only cloves to remain untouched by the falling 1987 delivery prices are the Ceylonese hand-picked, which are holding steady at $5.95 per pound.

ESSENTIAL OIL IMPORTS: SEPTEMBER

SELECTIVE STATISTICS FROM THE CENSUS BUREAU.

		SEPT. '86	AUG. '86	YR TO DATE	SEPT. '85
Bergamot	lbs.	9,178	10,196	82,140	9,653
Bitter Almond	lbs.	1,441	—	9,854	2,315
Cassia	lbs.	4,905	25,119	30,024	74,392
Cedarleaf	lbs.	4,558	6,000	20,376	2,486
Cinnamon	lbs.	22,057	—	74,799	6,696
Citronella	lbs.	142,140	270,605	1,068,569	202,510
Clove	lbs.	883,423	123,165	990,417	81,949
Cornmint	lbs.	16,204	5,424	178,986	—
Eucalyptus	lbs.	58,730	74,074	501,236	26,607
Geranium	lbs.	6,418	8,890	87,376	8,853
Grapefruit	lbs.	27,864	386	143,758	37,240
Lavenders	lbs.	13,151	10,547	111,594	10,921
Lemon	lbs.	124,576	95,408	1,496,715	198,202
Lemongrass	lbs.	35,157	24,000	121,912	—
Lime	lbs.	82,014	132,653	986,656	164,375
Neroli	lbs.	65	97	9,733	104
Nutmeg	lbs.	33,986	30,775	286,097	—
Orange	lbs.	322,482	242,726	5,511,600	1,022,887
Orris	lbs.	54	132	2,102	61
Patchouli	lbs.	27,006	100,727	556,522	31,890
Peppermint	lbs.	13,095	14,921	91,340	2,050
Petitgrain	lbs.	25,837	27,888	221,920	9,719
Pine Needle	lbs.	13,339	1,818	35,115	—
Rose	lbs.	8,630	7,266	77,280	13,375
Rosemary	lbs.	2,205	4,410	40,836	3,307
Sandalwood	lbs.	3,081	1,344	30,157	2,871
Thyme	lbs.	433	2,892	19,518	1,942
Vetivert	lbs.	3,550	22,124	39,327	6,129
Ylang Ylang or Cananga	lbs.	3,846	7,024	66,306	10,568

Mobil Polystyrene

Continued from Page 3

pany had not made a formal announcement of a price increase. Arco Chemical Company also has not made a price announcement for January.

Given the tightness in the polystyrene market, many producers are looking at ways to coax more product out of their production lines. Chevron, for example, is boosting line rates at its 440-million-pound-per-year plant at Marietta, Ohio. So far, the company reports, it has increased production rates for three of the plant's eight lines.

Fina is entering an "expansion-consolidation phase" involving the expansion of its Carville, La., plant and the consolidation of its Calumet City, Ill., plant into Carville. The company's overall polystyrene capacity is expected to remain virtually unchanged, at 415 million to 420 million pounds annually.

Dow, with approximately 830 million pounds of polystyrene capacity, is looking at "incremental expansions," the company says, while Polysar, which recently acquired Monsanto's polystyrene business, is "at the point of trying to understand what we have," the company says. Polysar's US polystyrene capacity now stands at an estimated 700 million pounds, with another 160 million pounds of capacity in Canada.

Huntsman plans to form a 50-50 joint venture with General Electric to complete construction and operate a new polystyrene plant in Selkirk, N.Y. Capacity figures haven't been disclosed, but Huntsman says the plant is expected to come on line in the first quarter of 1988.

Earlier this year, Arco bought an expandable polystyrene plant from Georgia-Pacific and the company is about finished with an expansion project for its "Dylark" styrene-maleic anhydride copolymer.

Most say extra capacity is needed to meet demand for polystyrene, but one of the smaller producers of the material hopes the industry is realistic about its expansion activities, noting the overcapacity troubles of the past.

While the market for polystyrene is strong now, this producer observes, extra capacity is scheduled to come on stream just when the business is likely to be in a downturn.

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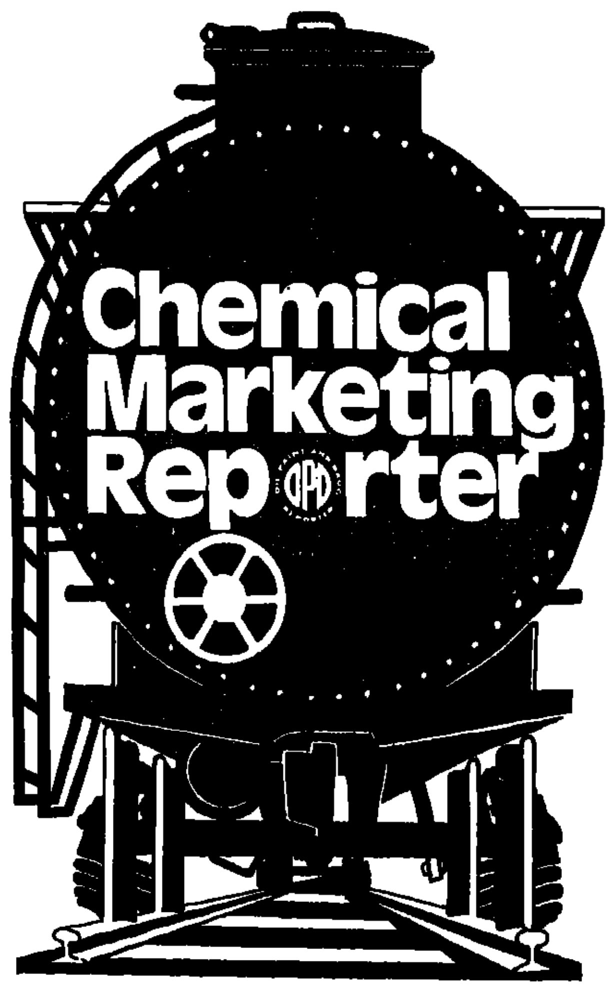

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Right-to-Know: Industry Faces Tougher Rates

If the chemical industry does not fully cooperate in implementing the community right-to-know provisions of the new superfund law, manufacturers will probably face even tougher requirements in the future, warns a congressman.

In a response to the Bhopal, India, toxic gas leak tragedy of 1984 and chemical plant leaks in this country, the new law requires large chemical makers and users to file public reports about the day-to-day release of hazardous and toxic substances from their plants during routine manufacturing.

The law also calls for better emergency planning and response procedures to be used following an accidental release and requires companies to file inventory forms specifying the amounts and location of hazardous chemicals at their plants.

The provisions allow for protection of trade secrets, a major industry concern, but chemical manufacturers say the right-to-know measures will be expensive and burdensome.

"If it doesn't work, there is going to be stricter regulation," Rep. Robert Wise (D-W. Va.), told members of the Synthetic Organic Chemical Manufacturers Association.

He said the final right-to-know provisions of the superfund law accomodate many industry concerns and he reminded SOCMA that the measures originally approved by the House — and later dropped by the House-Senate conference — conained far more extensive reporting requirements.

"I think the more balanced side won," Rep. Wise remarked. "The (House) proponents of this amendment smelled blood and were not willing to compromise. Every dry-cleaner in my district would have been covered, or so we thought."

The House version also contained "mass balance" requirements which would have forced companies to report the amounts of chemicals they received, produced, consumed, used, stored, shipped and released into the environment.

Advocates of this measure, such as Rep. Bob Edgar (D-Pa.), and Gerry Sikorski (D-Minn.), agrued it was necessary in order to detect and closely monitor accidental leaks.

But the final version of the legislation calls for a study to determine the value of such reporting.

The House adopted the more stringent reporting requirements because it was presented as a yes or no vote on protecting public health and the environment, Rep. Wise explained. The provision was deleted by the conference committee.

If the chemical industry is perceived as being lax in complying with the new right-to-know rules, "I think you'll see some form of (mass balance requirements) back soon," Rep. Wise predicted.

Arizona, Sylvachem In a Restructuring

Arizona Chemical Company and its subsidiary, Sylvachem Corporation, have restructured sales and marketing functions. Ernest Spinner, formerly vice-president of sales, has assumed the additional responsibility of marketing.

He will be responsible for worldwide sales and marketing activities for all Arizona Chemical and Sylvachem product lines, except polyamides and epoxy curing agents. Lee C. Bower has been appointed manager of EPA and polyamide businesses.

In other appointments, Charles W. Conlon has been named national sales manager of commodities, Alexander J. Conte has been appointed marketing manager of commodities, Samuel M. Berkowitz has been appointed marketing manager of adhesives and sealants, Jack W. Daniels has been appointed manager of distributor sales and Richard J. Whiteley has joined Arizona as manager of export sales.

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PET Bottle Resin Market To Grow 20 Percent in '87

Demand for bottle grade polyethylene terephthalate (PET), a small but important part of the overall PET market, continues to grow rapidly, producers say. By the end of 1987 they are expecting overall domestic bottle resin consumption to grow by almost 20 percent, with soft drink applications, which make up about 70 percent of the total market, growing 12 percent per year for the next few years.

Last year, total bottle polymer demand was 641 million pounds; this year, demand is expected to reach over 750 million pounds.

Producers have been expanding capacity, and expect to have expansion complete by 1988. Currently, they say, US capacity is close to 1 billion pounds. One producer estimates that debottlenecking projects have actually brought the total to 1.017 billion pounds.

Eastman Chemical Products Inc. is planning to bring 125 million pounds of new capacity on line by the first quarter of 1987, which should bring its total capacity to 625 million pounds. Both Goodyear and American Hoechst are said to be planning expansions, although actual amounts have not yet been disclosed.

PRICES HOLDING STEADY

Prices for the resin have held steady at last year's levels; prices in a few of the higher end use markets have firmed, but commodity grade prices have fallen slightly. One producer gives an average selling price of 52c. per pound for standard bottle-grade resin.

Currently, the industry is said to be operating at bottle grade total. Producers are not afraid of overcapacity developing in the long run, as new uses develop for the polymer.

The resins are extremely versatile, producers report; as one market analyst says, "growth has been limited only by a lack of new product ideas."

Within the soft drink bottling market segment, the 2-liter and 16-ounce bottles dominate. Other high growth applications include distilled water and alcoholic beverage packaging. The resins are currently being used in some wine-cooler packaging applications. Polyvinyl chloride, which is being used in water packaging applications, has not been taking any significant share of the market away from PET, producers report. New food packaging applications are also being developed.

Coca-Cola has begun to test market a 12-ounce plastic "PET-tainer" can to be used in place of aluminum. Although producers are still skeptical about the success of any aluminum replacement in soft drink packaging, and the cans live not yet been marketed on any large-scale basis, the "PET-tainer" project is expected to produce 100 million new PET cans by the end of the year.

Crystallizeable PET, or CPET, is also showing great potential, producers say, particularly in oven trays, as a replacement for coated paper and thermoset polyethylene. All producers are looking into this market, which is expected to double in size by the end of 1987, to between 40 and 50 million pounds. By 1990, producers feel this portion of the market could reach 150 million pounds.

PRIME PIGMENTS

CARBON BLACK — An article reporting Phelps Dodge's acquisition of Columbian Chemical Company, "Phelps Dodge Will Buy Carbon Black Producer," CMR, page 7, November 17, 1986, contained one error.

Huber Corporation, rather than Columbian Chemials, as stated in the article, acquired Phillips "Echoblack" plant in Orange, Texas this year. Columbian acquired Phillips' Hanover, West Germany plant, and took over its share of a "Sovalco" plant in the UK earlier this year.

PLASTICS ADDITIVES

ANTIMONY OXIDE — Asarco Inc. has cut antimony oxide prices for the third time since June. Through October, it lowered costs for the additive by a total of 15c. per pound. On November 24, prices were cut an additional 10c. per pound, with high tint material listed at $1.25 per pound, low tint at $1.30 per pound and ultra-pure at $1.40 per pound.

Primary producers of the additive are maintaining prices at previous levels, with high tint material listed around $1.50 per pound. Noting that Asarco is a byproduct, rather than primary producer of Sb_2O_3, they feel that the recent price cutting has been prompted by some internal corporate marketing decision, perhaps to liquidate excess inventories of the material, a byproduct of lead ore smelting.

Although they do not plan to adjust prices,

Continued on Page 34

PRICES TRENDLINES

WEEK ENDING NOV. 28, 1986

CHANGES/UP
None

CHANGES/DOWN
None

COATINGS INDEX

The Coatings & Plastics Index reflects the prices of 13 representative materials in this sector and the quantity of each produced in 1985.

Nov. 28, 1986	306.4
Nov. 21, 1986	306.4
Dec. 1, 1986	306.4
Nov. 29, 1985	306.4

Chemical Prices Start on Page 36

PLASTIC RESIN SALES & OUTPUT: JUNE

SPI'S COMMITTEE ON RESIN STATISTICS REPORTS.

		SALES AND USE (1,000 LBS) 1986	SALES AND USE (1,000 LBS) 1985	PRODUCTION (1,000 LBS) 1986	PRODUCTION (1,000 LBS) 1985
THERMOSETTING RESINS:					
Epoxy resins (unmodified)	lb.	31,212	33,673	38,702	37,548
Urea resins	lb.	139,679	102,897	139,720	103,710
Polyester resins	lb.	113,277	104,768	114,048	104,835
Phenolic and other tar acid resins	lb.	232,466	222,851	233,805	222,569
Melamine resins	lb.	16,215	15,949	14,943	15,635
THERMOPLASTIC RESINS:					
Acrylonitrile Butadiene Styrene (ABS)	lb.	88,755	87,933	86,095	95,881
Polyvinyl alcohol	lb.	N/A	11,851	N/A	6,355
Polyvinyl chloride	lb.	617,804	507,699	610,070	540,595
Polyethylene (density above 0.940)	lb.	617,472	540,875	567,123	566,078
Polyethylene (density below 0.940)	lb.	739,086	644,963	755,631	736,412
Polypropylene	lb.	480,859	455,153	463,889	430,364
Styrene-acrylonitrile (SAN)	lb.	5,257	7,841	6,359	7,711
Polystyrene (total)	lb.	402,495	339,365	390,654	366,654

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Phosphoric Acid Bid

Continued from Page 1

Belgium and Israel have been sold at unfair prices. Commerce will also decide to what extent the foreign producers involved have been subsidized by their governments.

When imposed, anti-dumping duties generally represent the difference between the price of the product sold in the producers home markets and in the US.

"Belgium and Israel have fair trade laws similar to ours," said Mr. Miller of Monsanto. "We believe most countries agree that unfair methods of competition must be stopped. We all have a stake in maintaining conditions which promote fair competition."

Industrial phosphoric acid is produced mainly in two grades: technical and food. Technical grade is used in a variety of applications, including acidic cleaners, aluminum brighteners, metal phosphatizing and cement processing. The food grade is used in jams, jellies, bread dough, cola beverages, cottage cheese and sugar refining.

BASES & SALTS

COPPER SULFATE — Prices have been depressed during 1986, say observers, but some think the market will soon firm because of the currency situation.

Prices range from 31c. to 46c. per pound. Sources say that importers cannot continue to keep prices in the low 30c. per pound vicinity, and will move closer to domestic pricing, although the imported product will remain cheaper. "Imported material should become less competitive," comments one source.

Domestic production totalled 9,562 metric tons during the second quarter, according to the Bureau of Mines. This is more than 2,000 metric tons greater than the first quarter's total (7,456 metric tons). In fact, no quarter in 1985 matched second quarter 1986.

Opinions vary concerning the increase. One source thinks that some companies are trying to increase their market share, so are making more product available. Another source notes an increasing demand from the wood treatment industry. Yet a third source cites the currency situation, explaining that imported material "isn't as attractive" as it was last year. Total demand for first two quarters of 1986 are 17,018 metric tons, slightly higher than the 16,997 metric tons produced during the first two quarters of 1986.

Demand is considered stable. Apart from the wood treatment industry's demand, noted above, no segment is expected to see significant growth.

One source mentions that this year, Environmental Protection Agency decided that toxicological studies should be conducted on all copper chemicals used as pesticides. Because of the expense, the industry has formed a task force, to help fund the studies. So far, CP Chemicals, Griffen Corporation, Old Bridge Chemical Co., Phelps Dodge and Tennessee Chemical Co. have joined the task force, but others have repeatedly shown interest. The sources estimate the studies will cost about $1 million.

LITHIUM CHEMICALS — Lithium Corporation of America, a subsidiary of FMC Corporation, is raising prices for various lithium chemicals, effective December 15, 1986. New prices for truckload volumes are as follows:

Lithium bromide, 54 percent brine, is $4.12 per pound of contained lithium bromide, up 6c. per pound; lithium fluoride is $5.12 per pound, up 22c.; lithium chloride, purified, is $3.49 per pound, up 17c., and lithium chloride, 40 percent brine, is unchanged at [illegible] per pound of contained lithium chloride.

The announcement follows one by Foote Mineral Company that it would raise its prices for various lithium chemicals by [illegible] percent, effective today (December 1).

SULFUR MONOCHLORIDE — Stauffer Chemical Company has followed Occidental Chemical (CMR, 11/17/86, p. 43) in posting price increases for sulfur monochloride and sulfur dichloride. Effective, December 1, or as contracts permit, Stauffer's new price for sulfur monochloride, shipped in tank cars, is $17.25 per hundredweight. For sulfur dichloride technical grade, also shipped in tank car quantities, Stauffer's new posting is [illegible] per hundredweight. Both products were hiked $1.00 per hundredweight.

Terms are f.o.b. LeMoyne, Ala., freight equalized with nearest competitive producing point.

POTASH — Kalium Chemicals, Saskatchewan, has announced a new price schedule for potash, effective November 1.

Standard costs $53 (minimum 62.4 percent K_2O); coarse is $58 (62.3 percent K_2O) and granular is $59.50 (minimum 62.3 percent K_2O). Prices are in US dollars, f.o.b. Kalium, for delivery in the continental US.

The terms of sale follow: for shipments from November 1 to November 30 there is a winter fill allowance, or rebate, of $8, with a cash discount of $3, net due March 31; from December 1 to January 18, the winter fill allowance is $6, with a $2 cash discount, net due March 31; from January 19 to February 28, the winter fill allowance is $4, with a cash discount of $1, net due March 31; from March 1 to March 31, the winter fill allowance is $1, net 30 days; and from April 1 forward, there is no winter fill allowance, net 30 days.

For shipment in 25 kilogram bags marked 62 percent K_2O loaded on railcars or trucks, there will be an additional charge of [illegible] per ton.

Cominco American, Inc. announced a similar price schedule recently (CMR, 11/24/86, pg. 23).

SULFURIC ACID — General Chemical Corporation is announcing an increase in its list prices for sulfuric acid, effective December 1 for open market orders and otherwise as contracts permit.

Shipments from Fort Madison, Iowa, will be increased by $4 per net ton, as is basis, or $4.30 per net ton, 100 percent basis. General Chemical markets material produced at AMAX's Fort Madison molybdenum plant.

All other US shipping points, including Claymont, Del.; Anacortes, Wash.; and Richmond, Baypoint and El Segundo, Calif., will be increased by $5 per ton, as is and 100 percent basis, respectively.

Additionally, an increase in the list price for sulfuric acid regeneration services is being announced, rising from $109 per net ton, 100 percent basis, to $124 per ton, based on refinery alkylation spent acids.

General Chemical's hike follows a similar announcement made by PVS Chemical Inc. for acid coming out of its Chicago, Ill., plant (CMR, 11/10/86, pg. 30).

ZINC — Falconbridge Ltd. announced last week that effective immediately the price for "Kidd Creek" brand high grade and special high grade zinc shipped to the US will be decreased to (US) 44c. per pound from 50c. per pound and that the price for shipments in Canada will be decreased to (Canadian) [illegible]c. per pound from 69½c. per pound.

Prices for prime Western grade and continuous line zinc with controlled lead added shipped to the US will be (US) 44.5c. per pound and for shipments in Canada, 61c. per pound.

Continuous line zinc with alumium added will be (US) 44¾c. per pound for shipments to the US and (Canadian) 61¼c. per pound for shipments in Canada.

In addition, Falconbridge announced that effective immediately, for sales outside North America, the base selling price for "Kidd Creek" brand zinc metal has been decreased to (US) $870 per metric ton from $911 per metric ton.

PRICES TRENDLINES

WEEK ENDING NOV. 28, 1986

CHANGES/UP

None

CHANGES/DOWN

None

HEAVY & AG INDEX

The Heavy & Ag Chemicals index reflects the prices of 18 representative materials in this sector and the quantity of each produced in 1985.

Nov. 28, 1986	113.60
Nov. 21, 1986	113.60
Oct. 31, 1986	113.60
Nov. 29, 1985	113.60

Chemical Prices Start on Page 36

PRICE HIGHLIGHTS

INORGANICS IN NOVEMBER

	NOV. (US $)	OCT. (US $)
Ammonia, US Gulf, barges	70-75	70-75
Caustic Soda, US Gulf, railcars	90-100	90-100
Chlorine, US Gulf, tankcars	140-150	140-150
DAP, US Gulf, barges	125-130	130-132
Soda Ash, Green River, Wyo.	73-77	73-77
Sulfuric Acid, S.E., tankcars	55-60	55-60

Prices are in short tons and represent quotations for large buyers.

SKF Seeks Own Stock in 'Dutch Auction'

SmithKline Beckman Corporation last week said it is inviting shareholders to tender shares of its common stock to the company at a price between $86 and $95 a share in a special program commencing November 26 and continuing until midnight, December 26, 1986.

Under the program, commonly called a "Dutch auction," the company is offering to purchase between 5 million and 15 million of its shares. As of November 21 there were 79,043,109 shares outstanding. Shareholders electing to tender their shares must do so by designating a price within the range of $86 to $95. Upon reviewing the tenders and subject to the terms of the offer, the Company will select a price from this range and purchase the shares tendered at or below that price.

Henry Wendt, president and chief executive officer, said: "This special program is a natural continuation of the purchase of SmithKline Beckman shares that we have been conducting since January, 1984. Purchase of the shares in the price range announced today is an attractive investment for the company and its continuing shareholders, given the company's business, assets and prospects and the current market price of the shares.

"We hope to complete the purchase program this year so that shareholders wishing to tender may take advantage of the favorable tax treatment of capital gains in effect through 1986," he said.

Mr. Wendt said the tender offer supplements other activities and investments by the company to ensure growth of the business over time; it does not foreclose other options to stimulate growth.

The company estimates its total sales for 1986 will be about $3.7 billion and that net earnings per share for the year will be between $6.75 and $6.80 (net earnings per share were reduced by 37 cents as a result of a special early retirement program dn the cost of "Contac" withdrawal). Earnings per share are based on the average number of shares outstanding during 1986 of about 77 million.

Since January, 1984 SmithKline Beckman has bought 8,979,400 of its shares. Upon completion of this tender offer, the continuing shareholders will obtain a proportionate increase in the future earnings and net assets of the company, subject to the increased risks associated with the debt incurred in purchasing the shares.

Neither the company nor its board of directors, which approved the plan today, makes any recommendation to shareholders whether or not to tender their shares, the company said. SmithKline Beckman has been advised that no officer or director intends to tender shares under the program, it said.

The board of directors had earlier declared a quarterly dividend of 75 cents per share payable December 19, 1986 to shareholders of record November 7, 1986. All shareholders of record on November 7, 1986 will receive the dividend, whether or not they tender their shares under this offer, Smithkline said.

Fertilizer Retail Yields Better Pay

Average retail fertilizer employee earnings rose nearly 7 percent above 1985 levels, according to results of a survey soon to be published by Fertilizer Institute.

The findings — which report salary, benefit, and bonus totals for 13 staff positions — compare compensation averages by region, type of firm ownership, annual sales volume, and years of employee service.

Among the results due to appear in the magazine's November/December issue, set for distribution in mid December, are data showing that plant owners paid themselves an average of $32,754. Nationally, cooperatives paid owner/managers a significantly lower salary ($30,353) than either company-owned ($34,532) or independent plants ($33,806).

For non-owner plant managers, however, cooperatives paid the highest salary, on average, than the other two ownership types. Plant managers averaged $26,453 at cooperatives, $25,431 at company-owned outlets and $25,752 at independents.

Independent operations took the lead on salaries for assistant plant managers — paying $500 more than cooperatives and $1,100 more than company-owned stores, on average. Of the 13 surveyed positions, however, assistant plant managers enjoyed the smallest salary increase from 1985 to 1986, posting an increase of less than 1 percent.

On the other hand, field salesmen boosted their salaries by the highest proportion — nearly 17 percent above 1985 levels. These employes earned roughly the same salary at independent and company-owned facilities, while field salesmen at cooperatives garnered nearly $4,000 less than their counterparts.

Agronomists earned substantially higher salaries at company-owned plants, drawing $25,713 compared to $21,431 at independent operations and $20,927 for cooperatives.

The survey revealed a marked change in employee turnover rates between 1985 and 1986. From 1984 to 1985, there was little turnover of personnel.

This year, however, nearly all reporting categories showed a drop in the years of employment with the same plant. The increased turnover may reflect the significant number of plant closings which have occurred during the same period.

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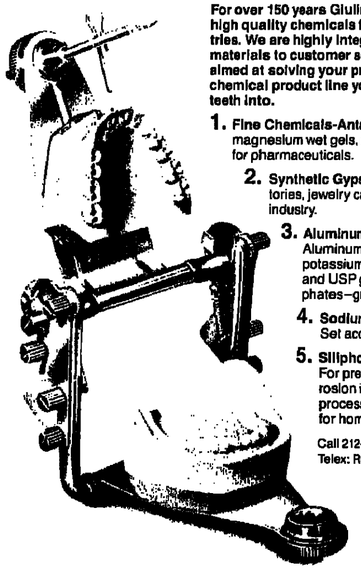

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COATINGS & PLASTICS

Continued from Page 31

producers complain that market prices have been softening gradually since June. During the first half of the year, the average market price was close to list, and high tint material stood at $1.50 per pound. It is now selling for around $1.40 per pound.

Part of this price erosion is a function of year-end slowdowns, they say. Finished goods imports, particularly from China, are also said to play a role in depressing prices. Producers disagree as to the extent of the Chinese import presence; one relates that imports have risen this year, while another says they have fallen slightly since last year. All agree, however, that Chinese material is having a definite impact on domestic pricing. Less imported material is coming in from the EEC, producers report, largely as a result of currency value shifts.

Off-list discounts have become the norm for high volume customers, with 5 to 10 percent discounts common, producers say.

While selling prices have eroded, raw material costs are going up. Metal raw material test prices have risen 10 percent in the past four months, and supplies, while adequate, are tight.

While one producer feels that 1986 will be a strong demand year and expects the domestic market to reach 42 to 44 million pounds this year, most feel that the 1986 market will repeat last year's lackluster performance.

Supplies of raw material from South Africa, Bolivia and China are adequate; more Chinese material is available this year, but producers say it is of questionable quality.

ORGANIC PEROXIDES — The Noury Chemicals Division of Akzo Chemie America will be raising both list and off-list prices for its lines of organic peroxide products effective January 1, the company announced last week. The 5 percent increase, needed to offset recent increases in labor, operating insurance and raw material costs, will affect prices for "Trigonox" peroxyesters and peroxyketals, "Perkadox" solid peroxydicarbonates, "Cadox" silicone pastes and dry benzoyl peroxide (BPO) formulations and "Cadet" powder grade BPO.

New prices for products purchased in quantities of 500 pounds or more are as follows: "Trigonox 29-B75", $4.63 per pound; "Trigonox BPIC," $7.35; "Trigonox F-C50," $2.43; "Trigonox 97-C75," $5.29; "Cadox TS-50," $12.60; "Cadox BS," $7.79; "Cadox PS," $17.42; "Cadox BFF-50," $2.63; "Cadox BTA," $2.00; "Cadox BPO 78 Powder," $9.20; "Perkadox 16," $10.50. Prices for commodity liquid grades of BPO will not be affected.

Despite overcapacity in the BPO and methyl ethyl ketone peroxide (MEKP) markets, July price increases were successful. Prices for BPO have been depressed for some time, producers explain.

Overcapacity is less of a problem in the peroxydicarbonate market; industry production is said to be running at 80 to 85 percent of capacity.

PLASTICS MATERIALS

POLYPROPYLENE — Two major producers of polypropylene will increase market prices for the resin in January. Fina Oil & Chemical Company is raising prices for all grades of "Fina" (formerly "Dypro") polypropylene resin by 3c. per pound, effective January 1. Similarly, Himont USA will increase prices for its "Pro-Fax" resins by 4c. per pound, effective January 5.

Demand has been exceedingly strong, producers report, and there has been no falling off of export levels.

Currently, capacity utilization rates are said to range between 95 percent and 98 percent of effective total. No capacity expansions have yet been announced, although Himont recently restarted some idled capacity. Generally, producers feel there is still enough capacity on standby to handle current demand.

POLYSTYRENE — Amoco Chemical Company and Mobil Chemical Corporation will be raising prices for all grades of polystyrene by 3c. per pound, effective January 1, the companies announced last week. They join most other producers in the price initiative.

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Alcohol Reversal Is Seen Possible With New Drug

A drug that quickly reverses or prevents the intoxicating effects of alcohol is under investigation by researchers at the National Institute of Mental Health.

"We have a drug that appears to block some of the effects of ethanol," says Dr. Peter D. Suzdak, principle author of a paper to be published in the next issue of the journal Science.

He adds, however, that the synthetic compound neither lowers the levels of alcohol in the body nor affects other aspects of intoxication, such as respiratory depression or coma.

"The drug probably has many clinical implications," says Dr. Suzdak. "Using it, we may be able to find out what makes the alcoholic drink, the anti-inhibitory effects, anti-anxiety effects, and so on. If the compounds then blocks these reinforcing effects, we might have a drug that could be used to treat alcoholic patients."

The drug was developed in Europe by Hoffman-La Roche as an agent to block the effects of its sedative diazapam, or "Valium." Work was halted when the company discovered other more efficient drugs for that use.

Research resumed a year ago after scientists at the health institute noticed its effects on alcohol. They found that rats receiving a dose of the compound did not become intoxicated from a subsequent dose of ethanol. Also, rats given an intoxicating injection of ethanol sobered up within three minutes after getting the compound, currently known as Ro 15-4513.

BASF Earnings Seen Higher Now

BASF Group says third quarter earnings exceeded year earlier levels for the first time this year, but lower pricing for products, and currency fluctuations have contributed to an overall decline in the Group's sales and earnings for the first nine months of the year.

The company says its worldwide businesses benefitted in the third quarter "from a significant turnaround" in the Deutschmark's relationship with the US dollar and the low price of oil and gas.

However for the first nine months of the year, sales for the BASF Group fell 5.7 percent to $13.9 billion, while pre-tax profits dipped 12.7 percent from the first nine months of 1985 to $966 million. Despite this the company has boosted capital expenditures by 14.5 percent in 1986 to $781 million.

For BASF AG, the German operations of the BASF group, sales slipped 7.3 percent in the first nine months of 1986 to $6.4 billion. Of that total, domestic sales were down 9.2 percent to $2.4 billion, while exports from Germany slipped 6.1 percent to just under $4 billion.

Expansions and acquisitions in North America, including the acrylic acid capacity expansion at Freeport, Tex., and the purchase of International Minerals & Chemical Corporation's oil and gas business, led to a 46 percent upturn in sales and a 6 percent increase in earnings for BASF Corporation, the company says.

Waste Data Report Is Offered by EPA

Environmental Protection Agency is making available a report summarizing data on non-hazardous solid waste activities nationwide that will be the basis for its report to Congress in November 1987 on the adequacy of current Federal solid-waste landfill standards.

The report includes information on the characteristics and management practices of solid wastes, as well as of land-disposal facilities and state solid-waste regulatory programs.

Also included in the report are data on industrial non-hazardous waste and information collected from states on municipal-waste landfill capacity problems.

Revlon Throws

Continued from Page 9

ing, said that until announcement that the bid had been dropped, the company had remained confident that it could obtain commitments to finance the transaction.

Almost immediately after abandoning the pursuit of Gillette, Revlon said that it had signed a definitive agreement with Playtex Holdings, Inc. for the acquisition of the Max Factor, Almay and Halston cosmetics, fragrances and toiletries businesses for $335 million in cash.

The transaction, which is expected to close in early December, is subject to the completion of Playtex' Holdings' purchase from BCI Holdings, Inc. of its personal consumer products operations, which include the businesses being acquired by the Revlon company.

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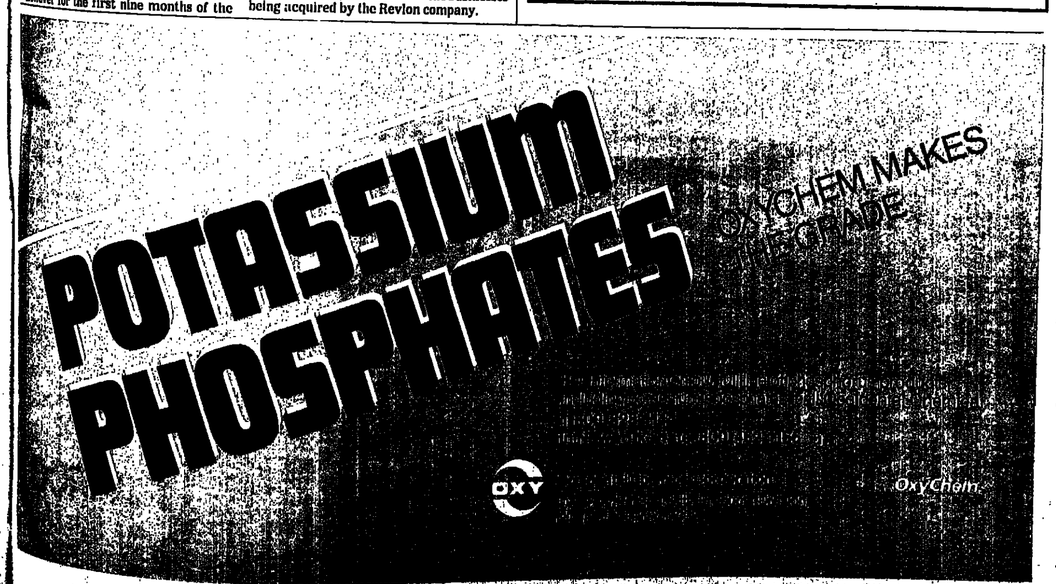

CHEMICAL PRICES

WEEK ENDING NOV 28, 1986

This chemical prices section contains spot quotations and/or list prices of suppliers of chemicals and related materials on a New York or other indicated basis. The listings are based on price information obtained from suppliers. Note that posted prices do not necessarily represent levels at which transactions actually may have occurred. They do not represent bid and asked prices, nor a range of prices over the week. Price ranges may represent quotations of different suppliers as well as differences in quantity, quality and location. All matters under this heading are fully covered by copyright.

An index of weekly chemical market reports is on the back cover.

A

Abies alba, dms. .... kilo	24.00	27.00
Acetaldehyde, 99%, tanks, frt. alld. lb.	.37	–
Prices 1c. higher in West.		
Acetaminophen (see N-Acetyl-p-aminophenol)		
Acetanilide, tech, flaked, bgs, t.l., f.o.b. works .... lb.	1.29	–
Acetic acid, tech., tanks, dlvd. E ... lb.	.25	–
Acetic anhydride, tanks, dlvd. E ... lb.	.43½	–
Acetic anhydride prices 1c. higher in West.		
Acetoacetanilide, dms., t.l., dlvd. .. lb.	1.29	–
Acetoacet-o-anisidide, dms., t.l., dlvd .... lb.	2.70	–
Acetoacet-o-chloroanilide, dms., t.l., dlvd .... lb.	2.85	–
Acetoacet-o-toluidide, dms., t.l., dlvd .... lb.	1.58	–
Acetoacet-m-xylidide, dms., t.l., dlvd .... lb.	3.33	–
Acetone, tanks, dlvd. E. .... lb.	.25	–
dlvd. Zone 2 (Calif.) .... lb.	.27	–
dlvd. Zone 3 (W. of Rockies excluding Calif) .... lb.	.27	–
Acetonitrile, tanks, frt. alld .... lb.	.53	.54½
Acetophenetidin (see Phenacetin).		
Acetophenone, tech., tanks, f.o.b. works .... lb.	.76	.85
perfume grade, extra, cns. .... lb.	2.15	–
N-Acetyl-p-aminophenol, c.l., t.l. works .... kilo	5.95	6.64
Acetylene black, imp., 50% compressed, 12½-lb. bgs. c.l., t.l. frt. extra .... lb.	.96	–
100%, 25-lb. bgs., same basis .... lb.	.95½	–
Acetylene tetrabromide, tanks, f.o.b. works .... lb.	.97	–
Acetylsalicylic acid, USP (see Aspirin).		
Acetyltributyl citrate, bulk, f.o.b. works .... lb.	1.28	–
Acetyltriethyl citrate, bulk, f.o.b. works .... lb.	2.08	–
Acrolein, tech., tanks, works .... lb.	.82	–
Acrylamide, solid, t.l. works .... lb.	1.00	–
soln., 100% basis tanks, works. .. lb.	.74	.77
Acrylic acid, glacial, reg., tanks, dlvd. .... lb.	.67	–
tech, tanks, frt. alld .... lb.	.60	–
Acrylonitrile, tanks, works .... lb.	.39½	.45½
Acrylonitrile-butadiene-styrene resin, high-impact, nat., t.l., dms., dlvd .... lb.	1.09	1.12
medium-impact, nat., same basis lb.	1.05	1.08
low-impact, nat., same basis .... lb.	.98	1.01
Adipic acid, resin grade, bulk, hopper cars, frt. equald .... lb.	.57	–
bgs., t.l., c.l frt. equald .... lb.	.59	–
Agar USP, powd., 80 to 100 mesh, dms. .... lb.	9.50	9.85
Alcohol, syn. C-6 to C-10, tanks, f.o.b. works .... lb.	.38	–
C-12 to C-13, tanks, dlvd .... lb.	.57	.59
C-14 to C-15, tanks, dlvd .... lb.	.57	–
C-16 to C-18, tanks, dlvd .... lb.	.60	–
Aldehyde, C-6, dms. .... lb.	4.10	5.70
C-7, dms. .... lb.	1.95	–
C-8, dms. .... lb.	4.30	6.30
C-10 dms. .... lb.	4.30	5.35
Algin (see Sodium alginate.)		
Alkali blue, dry, flushed, 110-lb. dms, dlvd .... lb.	3.72	3.83
Alkali blue prices 1c. higher W. of Rockies.		
Allspice Guatemalan / Honduran, bgs. .... lb.	.92	–
Jamaican, bgs .... lb.	1.05	–
Allyl alcohol, tanks, f.o.b., Bayport, Tex. .... lb.	.90	–
Allyl bromide, 500-kilo dms. 2,000 lbs. or more, works .... lb.	5.50	–
Allyl caproate, 25-lb. cns. .... lb.	3.90	4.50
Allyl chloride, tanks, f.o.b. works .. lb.	.65	–
Allyl isothiocyanate, bots .... lb.	5.40	6.90
Almond oil, artif., bitter (see Benzaldehyde.)		
Almond oil, nat. bitter, NF f.f.p.a. bots .... lb.	3.50	3.80
sweet .... lb.	1.24	1.60
Aloe, Cape, cs. .... lb.	2.00	–
powd., cs .... lb.	2.25	2.75
Curacao, kgs .... lb.	2.60	–
powd., kgs .... lb.	3.00	–
Aloin, NF, dms. .... lb.	6.00	6.70
Alum, ammonium, tech. gran., bgs., c.l., t.l, works .... 100 lb.	35.00	–
FCC powd., fiber dms., works 100 lbs.	55.00	–
Alum, potassium, tech. gran. bgs., c.l., t.l., works .... 100 lbs.	35.00	–
FCC powd fiber dms, works. 100 lbs.	55.00	–

Alumina, activated, gran., 100-lb. bgs., 40,000-lb. min. c.l., works. ton	821.00	–
calcined, bulk, same basis .... ton	354.00	–
100-lb. bgs., same basis .... ton	380.00	–
hydrated, white, bulk, same basis .... ton	190.00	–
100-lb. bgs., same basis .... ton	224.00	–
Aluminum acetate, basic, dms., l.c.l., works .... lb.	3.25	–
Aluminum chloride, anhyd., soln., 500-600 lb. dms., c.l., t.l., works, frt. equald .... lb.	.53	–
bulk, same basis .... lb.	.48	–
semi-bulk bins, same basis .... lb.	.52	–
Aluminum chloride, coml., soln., 32° tanks, works .... 100 lbs.	15.00	–
ret. dms., c.l., works .... 100 lbs.	12.00	–
non-ret. dms., same basis . 100 lbs.	20.00	–
Aluminum formate, dibasic, liq. 8% Al_2O_3 t.l., works .... lb.	.55	–
Aluminum hydrate (see Alumina, hydrated)		
Aluminum hydroxide, dried, gel, NF, 75-lb. dms., c.l., t.l., works. lb.	2.75	3.50
Aluminum metal, 99½% or more, 50-lb. pigs., 30,000-lb. lots, frt. alld. .... lb.	.76	–
Aluminum oxide amorphous (see Alumina, calcined).		
Aluminum paste, leafing grade, std., lining, 2,400 lb. lots, dlvd .... lb.	1.40	–
lining, extra-fine, same basis .... lb.	1.99	2.14
Aluminum phenolsulfonate, purif., 100-kilo dms., t.l. .... kilo	6.46	–
Aluminum powder, leafing grade, std. lining, 2,400 lb. lots, dlvd. . lb.	3.17	–
extra fine, lining, same basis .... lb.	4.04	–
Aluminum stearate, bgs., c.l. .... lb.	1.25	1.36
Aluminum sulfate, coml., grd., 100 lb. bgs., c.l., works, frt. equald., basis 17% Al_2O_3 East and Gulf Coasts .... ton	205.00	–
West Coast .... ton	220.60	–
liq., tanks, N.E. same basis .... ton	145.00	–
iron-free, dry, bgs., c.l. same basis .... ton	300.00	–
liq., tanks, same basis .... ton	225.00	265.00
Aluminum sulfate, USP, gran., dms. lb.	–	.337
Aminoacetic acid, USP, dms., 20,000 lbs., f.o.b. works .... lb.	2.12	–
tech., t.l., same basis .... lb.	1.88	–
p-Aminobenzoic acid, 1,000 kilos or more, dms., f.o.b. works . kilo	9.60	10.10
2-Amino-4-chlorophenol dry and grd., 14,000 lbs. or more, frt. alld. lb.	5.79	–
Aminoethyl ethanolamine, tanks, frt. collect .... lb.	1.33½	–
N-Aminoethyl piperazine, tanks, f.o.b., frt. collect .... lb.	1.05	–
2-Amino-2-ethyl-1,3-propanediol dms., t.l. f.o.b. works .... lb.	1.82	–

2-Amino-2-methyl-1-propanol, 95%, dms., c.l., t.l., f.o.b. works . lb.	.95	–
tanks, f.o.b. works .... lb.	.89	–
o-Aminophenol, dms., f.o.b. Charlotte, N.C. .... lb.	3.95	–
p-Aminophenol, t.l. dms., f.o.b. Raleigh, N.C. .... kilo	7.15	–
p-Aminosalicylic acid, USP, 50-kilo dms., t.l. .... kilo	18.50	–
Ammonia, anhyd., fertilizer, wholesale, tanks, dlvd. Midwest terminals .... ton	165.00	170.00
tankcars, f.o.b. Gulf Coast ... ton	80.00	85.00
aqueous, 29.4% NH_3, anhyd. basis, tanks, frt. equald. E. of Rockies .... ton	260.00	315.00
Ammoniacal liquor (see Ammonia, aqueous).		
Ammoniac sal, galvanizing grade, bgs., c.l., f.o.b. works 100lbs	28.60	–
Ammoniac sal. white (see Ammonium chloride coml.).		
Ammonium biborate, gran., dms., c.l. works .... lb.	.90	–
Ammonium biborate powder 15c. per lb. higher.		
Ammonium bicarbonate, 300-lb. fib. dms., c.l., works .... 100 lbs.	26.00	–
bgs., c.l. .... 100 lbs.	25.00	–
Ammonium bichromate, photo-litho grade, gran. 100-lb. dms., l.t.l. works .... lb.	2.00	–
Ammonium bifluoride, bgs., t.l., works .... lb.	.70	–
Ammonium bromide, dom. NF, gran., dms., c.l., t.l., f.o.b. works . lb.	1.31	–
Ammonium chloride, white, tech., fine gran., bgs., c.l., works .... 100lbs.	18.00	–
USP, gran., dms. .... lb.	.40	.53
Ammonium citrate, dibasic, 250-lb. dms. f.o.b. works .... lb.	2.79	–
Ammonium dimolybdate, approx. 85%, 24,000 lbs. or more . lb.	5.48	–
Ammonium fluoborate, tech., dms., c.l., t.l., works, frt. equald. . lb.	1.79	–
Ammonium heptamolybdate, cryst., dms., 24,000 lbs. f.o.b. works .... lb.	5.57	–
Ammonium lauryl sulfate, tanks, f.o.b. works .... lb.	.29	.32
Ammonium lignin, sulfonate, bulk, f.o.b. Hoquiam, Ore. .... ton	72.00	–
Ammonium nitrate, dom., fertilizer grade, 33.5% N, bulk, S.E. dlvd .... ton	130.00	135.00
Ammonium oxalate, tech., fine. gran 300-lb. dms., t.l., f.o.b. works .... lb.	1.42	1.68
Ammonium pentaborate gran. bgs., c.l., works .... lb.	.75	–
Ammonium pentaborate powder 20c. per lb. higher.		
Ammonium persulfate, 225-lb. dms, 24,000 lbs. or more, f.o.b. works .... lb.	.58	–
55-lb. bgs., same basis .... lb.	.56½	–
Ammonium phosphate (see Di- and monoammonium phosphates).		
Ammonium silicofluoride, dms. c.l., t.l., works .... lb.	.30¾	–
Ammonium sulfate, lg. gran., bulk, c.l., works .... ton	80.00	90.00
std., coml., bulk, f.o.b. works .. ton	60.00	70.00
tech., bgs., c.l., t.l., works .... ton	108.00	120.00
Ammonium sulfide, liq., 40-44% tanks, 100% basis, frt. equald. .ton.	460.00	–
Ammonium sulfocyanide, tech. (see Ammonium thiocyanate).		
Ammonium thiocyanate, tech., cryst., bgs., c.l., works .... lb.	1.02	–
tech soln., 50%, tanks, frt. equald., ... lb.	.93	–
Ammonium thiosulfate, photographic, 60%, tanks, f.o.b. works .. lb.	.13	–
Ammonium zirconyl carbonate, soln., bulk .... lb.	.72	–
Amyl acetate, primary mixed isomers, tanks, dlvd. .... lb.	.57	–
Amyl alcohol, primary mixed isomers, tanks, frt. alld. .... lb.	.46½	–
Amyl cinnamic aldehyde, dms. .... lb.	2.35	2.50
p-tert-Amylphenol, bulk, works .... lb.	.91	1.03
Amyris oil, dms. .... lb.	11.00	–
Anethole, tech., dms. .... kilo	10.20	–
USP, dms. .... lb.	3.85	4.60
Angelica root oil, bots .... kilo	700.00	–
Aniline, tanks, f.o.b. .... lb.	.33	.35½
Anise oil, dms .... kilo	8.90	–

Anise seed, Chinese, bgs .... lb.	1.40	–
Spanish, bgs .... lb.	1.13	–
Turkish, bgs. .... lb.	1.10	–
Anisic aldehyde, cns., dms. .... lb.	4.80	5.40
o-Anisidine, imp., dms., dlvd. .... lb.	2.27	–
p-Anisidine, imp., cast solid, dms., works .... lb.	1.90	–
flakes, same basis .... lb.	2.25	–
Anthranilic acid, purif., 99% min., dms., t.l., frt. alld .... lb.	1.70	–
Antimony fluoborate, liq. conc., 175-lb. dms., t.l., works .... lb.	3.02	–
Antimony metal, bulk, c.l., mines .. lb.	1.35	1.39
Antimony oxide, high-tint, bgs., c.l., frt. alld. E. of Rockies .... lb.	1.25	1.50
Antimony trichloride, anhyd., solid, dms., t.l. works .... lb.	3.60	–
Apomorphine hydrochloride, NF, bots., ... gm.	15.00	–
Apricot kernel oil, dms. .... lb.	2.05	–
Arabic gum, powd., bbls. .... lb.	1.86	2.15
spray dried .... lb.	2.00	2.50
USP grade .... lb.	6.76	9.25
Aromatic petroleum solvents (see Solvent, naphtha, petroleum, aromatic).		
Arsenic, crude (see Arsenious trioxide).		
Arylid, red (see Napthol, arylid red).		
Arsenious trioxide, 99%, bulk, c.l., f.o.b. warehouse .... lb.	.42	.45
Asbestine (see Talc, fibrous).		
Ascorbic acid, USP, 100 kilos, dlvd .... kilo.	11.00	–
Ash, black (see Barium sulfide).		
Asphalt gilsonite, (see Gilsonite).		
Asphalt petroleum cutback, tanks, E. Coast .... gal.	.86	–
emulsion, tanks, tankwagons, E. Coast .... gal.	.68	–
steam-refined, 40-300 penetration, tanks, tankwagon .... ton	170.00	–
steep roofing grade, bulk tankwagon .... ton	175.00	–
Aspirin, USP, cryst., powd., 250-lb. dms., c.l., f.o.b. .... lb.	1.85	–
10% starch granulation, white, 250-lb. dm. c.l., f.o.b. .... lb.	1.97	–
16% starch granulation, white, same basis .... lb.	2.80	–
Freight equald. shipt. identical quantity over standard routes from N.Y., Phila., Midland, Mich., Chicago and St. Louis.		
Atropine sulfate, USP, bots .... oz.	10.00	11.00
Avocado oil, dms. .... lb.	4.00	4.50
Azelaic acid, tech., 50-lb. bgs., t.l., c.l., dlvd .... lb.	1.23	–
Azo orange, bbls., dlvd .... lb.	7.00	9.50
Azo yellow, 10 G. bgs., dlvd. E. of Rockies .... lb.	8.95	–
Azo G yellow pigment, bgs., same basis .... lb.	6.85	–

B

Bacitracin, USP, non-sterile, one billion units or more ... million units	6.30	6.60
Barbital, NF, 50-kilo dms., dlvd. .. kilo	22.50	–
Barbital-sodium, NF, 50-kilo dms. dlvd .... kilo	23.00	–
Barite, dry-grd., Southern, off-color, coarse, bgs., c.l., f.o.b. mines lb.	.09	.11
water-grd., white, bgs., c.l., f.o.b. works .... lb.	.13	–
unbleached, extra-fine, pigment grade, c.l., f.o.b. works .. ton	160.00	–
Barium carbonate, precip., bulk, c.l., works, frt. equald .... lb.	.25	–
bgs., same basis .... lb.	.25½	–
photo grade, bgs., same basis ton	510.00	–
Barium chlorate, 100-lb. dms., 1-10 dm. lots, works .... lb.	1.04	–
Barium chloride, tech., cryst., bgs., c.l., works .... ton	470.00	–
anhyd. drums c.l., same basis. ton	590.00	–
Barium chloride, purif., cryst. 400-lb. dms., works .... lb.	3.76	–
Barium monohydrate, 55-lb. bgs., c.l., t.l. f.o.b. works .... 100 lbs.	48.00	–
octahydrate, cryst., bgs., same basis .... 100 lbs.	33.00	–
Barium nitrate, 100-lb. bgs., t.l., works .... 100 lbs.	32.50	–

ABBREVIATIONS

THE TERMINOLOGY OF THE CHEMICAL MARKETPLACE

a/alpha
alld/allowed
amorph./amorphous
AMP/American melting point
anhyd./anhydrous
AOAC/Association of Official Agricultural Chemists
a.p.a./available phosphoric acid
approx./approximately
artif./artificial
ASTM/American Society for Testing & Materials

b/beta
Be/Baume
bbls./barrels
b.g./beta-gamma
bgs./bags
bls./bales
bots./bottles
b.p./boiling point
b.p.l./bone phosphate of lime
b.r./boiling range
bxs./boxes

C./Centigrade
cbys./carboys
c.c./cubic centimeters
CD/completely denatured
c.i.f./cost insurance freight
c.l./carload
cns./cans
coml./commercial
conc./concentrated
cp/chemically pure
cps./centipoises
cryst./crystalline
cs./cases
ctns./cartons
cyls./cylinders

d-/dextro
dbl./double
denat./denatured
dest.-dist./destructively distilled
dl/dextro-laevo
dist./distilled
distr./distributor
dlvd./delivered
dms./drums
dom./domestic

E/East
e.p./end point
equald./equalized
exp./expressed
extr./extracted

F./Fahrenheit
f.a.s./free alongside
ferment./fermentation
f.f.a./free fatty acid
f.f.c./free from chlorine
f.f.p.a./free from prussic acid
fib./fiber
f.o.b./free on board
f.p./freezing point
frt./freight

g-/gamma
gal./gallon
g.p./general purpose
gran./granular
grd./ground

i.b.p./initial boiling point
imp./imported

incl./included
indust./industrial

kgs./kegs

l-/laevo
lb./pound
l.c.l./less carload
l.t.l./less truckload
liq./liquid

m-/meta
m.a.p./mixed aniline point
mcg./microgram
mfrs./manufacturers
min./minimum
molt./molten
m.p./melting point

N/nitrogen
n-/normal
nat./natural
neut./neutral
NF/National Formulary
No./number
Nom./nominal

o-/ortho
ord./ordinary
oz./ounce

P/phosphorus
p-/para
Pac./Pacific
pf./proof
phos./phosphate
photo/photographic
pkgs./packages
powd./powdered
precip./precipitated
prod./producer
pt./point
pulv./pulverized
purif./purified

redist./redistilled
refd./refined
refy./refinery
resub./resublimed
ret./returnable

SD/specially denatured
s.d./single distilled
SE/Southeast
sec./secondary

secs./seconds
sp.g./specific gravity
ship't/shipment
soln./solution
std./standard
syn./synthetic

tanks/railroad tankcars
tech./technical
tert./tertiary
t.l./truckload
ton/refers to short ton of 2,000 pounds
TVA/temporary voluntary allowance
t.w./tankwagons

USP/United States Pharmacopeia

vis./viscosity
VM&P/varnish makers & painters

W/West
whse./warehouse
w.w./water-white

NOTE: A unit-ton is 1 percent of 2,000 pounds of the basic constituent or other standard of the material. The percentage figure of the basic constituent multiplied by the unit-ton price shown in Chemical Marketing Reporter gives the price of 2,000 pounds of the material.

Barium oxide, grd., dms., c.l., dlvd .... 100 lbs.	31.25	–
tote bins, same basis, .. 100 lbs.	30.00	–
Barium peroxide, 700-lb. dms., c.l., t.l., works .... lb.	.30	–
Barium stearate, bulk, t.l., f.o.b. dest .... lb.	1.05	–
Barium sulfate, tech. (see Barite and Blanc fixe).		
Barium sulfate, USP, X-ray diagnosis grade, powd., 25 kilo bgs., 10,000 kilo lots .... lb.	.58½	–
Barium sulfide (black ash), dms., c.l., works .... ton	460.00	–
Basil Egyptian .... lb.	.67	.95
French .... lb.	.88	.90
Basil oil, Comores .... lb.	55.00	–
Basil oil, Egyptian .... lb.	62.00	–
Battery acid, t.l., f.o.b., works .... ton	52.00	70.75
Bauxite, calcined, refractory grade, 87%-88% Al_2O_3, Baltimore & Mobile .... metric-ton	229.28	–
Bayol, NF, 50-55%, dms .... lb.	11.00	–
Bayberry wax, bgs. .... lb.	2.70	3.00
Beeswax, refd., bleached white, bricks, 100-lb. ctns. .... lb.	3.10	3.20
white, slabs, 100-lb. ctns. .... lb.	3.05	3.10
yellow, bricks, 100-lb. ctns. .... lb.	3.00	3.10
yellow, slabs, 100-lb. ctns. .... lb.	2.95	3.05
Bentonite, dom., c.l. bags, f.o.b. works .... ton	43.50	–
Benzaldehyde, NF, dms. .... lb.	1.25	–
tech., dms., c.l., t.l. .... lb.	.73	.83
Prices are 4c. per lb. higher West of the Rockies.		
Benzene, indust. or nitration, barges, f.o.b.		
Baton Rouge, La. .... gal.	.92	–
Baytown, Tex. .... gal.	.92	–
Beaumont, Tex. .... gal.	.92	–
Catlettsburg, Ky. .... gal.	.92	–
Chicago district .... gal.	.92	–
Chocolate Bayou, Tex. .... gal.	.92	–
Clairton, Pa. .... gal.	.92	–
Corpus Christi, Tex. .... gal.	.92	–
Deer Park, Tex. .... gal.	.92	–
Houston district, spot .... gal.	.93	.93½
Lima, Ohio .... gal.	.95	–
Wood River, Ill. .... gal.	.92	–
Benzene hexachloride, 99% gamma isomer (see Lindane).		
Benzidine orange, powd., bgs., dlvd. lb.	4.90	6.70
liq, containers, dlvd. .... lb.	3.38	3.89
Benzidine yellow, AAA, bgs., dlvd. . lb.	5.80	6.05
AAOA, bgs., dlvd .... lb.	7.35	7.40
AAOT, bgs., dlvd .... lb.	5.95	6.20
Benzocaine, USP, dms., 1,000 kg. lots, f.o.b., works .... kg.	10.00	11.50
Benzodihydropyrone, dms. .... lb.	12.50	–
Benzoic acid, tech., bgs., c.l., t.l., f.o.b. works .... lb.	.55	.58
USP cryst., dms., ton lots same basis .... lb.	1.73	1.75
Benzoin gum, Sumatra, cs. .... lb.	1.80	–
Benzophenone, N.F., 1,000 lbs. or more, f.o.b. .... lb.	3.50	3.60
[illegible], 1,000 kilos or more, f.o.b. .... kg.	7.45	–
tech., 1,000 kilos or more, fob works .... kgs.	4.35	–
2-Benzothiazyl disulfide (see Mercaptobenzothiazyl disulfide).		
Benzotriazole, flake, dms., 1,000 lbs. or more, f.o.b. works .... lb.	6.10	–
powd., dms., 1,000 lbs. or more, same basis .... lb.	6.20	–
photo-grade, dms., 1,000 lbs. or more, same basis .... lb.	9.90	–
Benzotrichloride, refd., dms. t.l., frt. equald. .... lb.	.87	–
[illegible], frt. equald .... lb.	.80	–
Benzoyl chloride dms., c.l., works .. lb.	.57	.59
[illegible], frt. equald .... lb.	.74½	.75
Benzoyl peroxide, regular gran., 10,000-lb. lots or more, bgs., works, frt. equald .... lb.	2.35	6.98
paste, 50% and 55% formulations, dms., pails, frt. equald .... lb.	1.71	1.95
Benzyl acetate, dms. .... lb.	1.00	1.25
Benzyl alcohol, N.F. t.l. dms. frt. equald .... lb.	1.26	1.85
tanks, same basis .... lb.	1.37	1.43
photo grade, t.l., dms., same basis .... lb.	1.40	–
tanks, same basis	1.34	–
tech. grade, t.l., dms., same basis lb.	1.32	–
tanks, same basis	1.26	–
Benzyl benzoate, dms. .... lb.	1.65	2.25
Benzyl chloride, tech., non-ret. dms., c.l., t.l., frt. equald .... lb.	.50	–
tanks, f.o.b. .... lb.	.54	–
Benzyl cinnamate, 25-lb. cns. .... lb.	8.60	9.05
Benzyl-N,N-dimethylamine, t.l., dms., f.o.b. works .... lb.	2.30	–
Benzyl formate, dms. .... lb.	10.60	–
6-tert-Butyl-m-cresol (see Mono-tert-butyl-m-cresol).		
Benzyl isoeugenol, dms. .... lb.	15.50	–
Benzyl propionate, dms. .... lb.	3.35	–
Benzyl salicylate .... lb.	2.90	3.25
Benzylidene acetone, cns., bots .... lb.	2.95	3.25
Bergamot oil .... kilo	44.75	–
b-Hydroxynaphthoic acid (see b-Oxynaphthoic acid).		
Biotin, cryst., 500 gms. or more ... gm.	5.00	5.50
Biphenyl (see Diphenyl).		
Bismuth nitrate, purif. cryst., 100-lb. dms., frt. equald .... lb.	10.00	–
Bismuth oxychloride, 100-lb. dms., works .... lb.	17.20	–
Bismuth subcarbonate, USP, medium powd., 225-lb. dms., works. lb.	15.31	15.50
Bismuth subgallate, purif., 100-lb. dms., works .... lb.	10.60	–
Bismuth subnitrate NF, powd., 200-lb. dms., works .... lb.	14.45	–
Bismuth subsalicylate, purif. powd., 50-100 lb. dms., works .... lb.	17.00	–
Bismuth trioxide, reagent, powd., 100-lb. dms., works .... lb.	15.00	15.45
Bisphenol-A, epoxy grade, hopper cars, dlvd .... lb.	.67	–
polycarbonate grade, same basis lb.	.71	–
Blanc fixe, syn., imp., bags .... lb.	.20	–
Bois de rose oil, Braz., dms. .... lb.	6.75	–
Bon toner (red 48) dms., frt. alld. .. lb.	7.25	8.05
(red 52) dms., same basis .... lb.	6.50	7.90
Bonemeal, steamed, dom., bgs., c.l., f.o.b. Midwest plants .... ton	180.00	190.00
Bone phosphate, defluorinated of lime (see Defluorinated phosphate).		
Bone phosphate, precip. (see Calcium phosphate tribasic).		
Borax, tech. anhyd. 99%, bgs., c.l., works .... ton	647.00	–
bulk, c.l., works .... ton	602.00	–

Borax, tech., gran., decahydrate, 99½% bgs., c.l., works .. ton	237.00	–
bulk, c.l., works .... ton	192.00	–
tech., pentahydrate, gran. 99½%, bgs., c.l., works .... ton	265.00	–
bulk, c.l., works .... ton	220.00	–
Borax, NF (See Sodium borate).		
Boric acid, tech., gran., 99.9%, bgs., c.l., works .... ton	614.00	–
bulk, c.l., works .... ton	569.00	–
Boron trichloride, CP, 1,800-lb. cyls., works .... lb.	3.80	–
Boron trifluoride, 60-lb. cyls., t.l., f.o.b. works .... lb.	4.03	–
bulk, same basis .... lb.	3.47	–
Boron trifluoride, etherate, 500-lb. dms., t.l., f.o.b., works ... lb.	2.35	–
phenolate, 500-lb. dms., t.l., same basis .... lb.	1.65	–
Bromine, dms., t.l., works .... lb.	.87	–
bulk, 45,000-lb. min., works .... lb.	.33	.34½
purif., t.l., dlvd .... lb.	.75	–
Bromine dlvd., prices for dms. and bulk shipped W. of Rockies, 1c.-per-lb. higher. Bulk t.l. prices 1c. to 2½c.-per-lb. higher for 30,000-lb. min. and 4c. to 5½c.-per-lb. higher for 15,000-lb. min.		
Bromochloromethane, dms., c.l., f.o.b. Midland .... lb.	1.12	–
Butadiene, tanks, f.o.b. .... lb.	.12½	.13
1,4-Butanediol, tanks, f.o.b., frt. equald .... lb.	.80	–
dms., same basis .... lb.	.88	–
Butene-1, tanks, f.o.b. works .... lb.	.26	.28
n-Butyl acetate, syn., tanks, frt. alld. lb.	.52½	–
n-Butyl acrylate, tanks, frt. alld. E. ... lb.	.69	–
n-Butyl alcohol, syn., ferment, tanks, frt. alld .... lb.	.34	–
sec-Butyl alcohol, syn., tanks, dlvd. lb.	.365	–
tert-Butyl alcohol, syn., tanks, dlvd. E. .... lb.	.70	–
Butyl aldehyde (see Butyraldehyde)		
Butyl benzyl phthalate, tanks, frt. alld .... lb.	.59	–
Butyl chloride, tanks, works .... lb.	.99	1.00
Butyl cyclohexyl phthalate, tanks, dlvd .... lb.	.74	–
n-Butyl ether, dms., c.l., t.l., works .. lb.	1.85	–
Butyl isodecyl phthalate, tanks, dlvd .... lb.	.35	–
n-Butyl lactate, tanks, f.o.b. works . lb.	1.58	–
n-Butyllithium, 15% soln., 1,000-lb. lots or more, cyls., 100% basis, dlvd .... lb.	15.45	–
tanks, 3,000-lb. min., 100% basis, dlvd .... lb.	14.75	–
Butyl methacrylate, tanks, frt. equald .... lb.	.88	–
Butyl octyl phthalate, tanks, dlvd. E. .... lb.	.40	.42
Butyl oleate, dist., dms., c.l. .... lb.	.70	.82
tanks .... lb.	.80	.75
p-tert-Butylphenol, tanks works ... lb.	.70	–
Butyl phthalate (see Dibutyl phthalate).		
Butyl stearate cosmetic, dms., 77 dms. or more .... lb.	.91	.97
tanks .... lb.	.92	–
Butyl stearate tech., t.l. .... lb.	.60	.62
tanks .... lb.	.55	.58
Butylamine (see Mono-, Di- and Tributylamine).		
tert-Butylamine, dms., c.l., t.l., f.o.b. works .... lb.	1.31	–
tanks, same basis .... lb.	1.17	–
Butylated hydroxyanisole, food grade, dms, dlvd .... lb.	8.80	8.85
Butylated hydroxytoluene, food, feed grades, c.l., t.l., bgs., dlvd . lb.	1.27	1.40
tech., bgs., c.l., t.l., dlvd .... lb.	1.25	1.38
1,3-Butylene glycol, tanks, dlvd ... lb.	.72	–
Butyraldehyde, tanks, dlvd .... lb.	.29½	.38
Butyric acid, tanks, frt. alld .... lb.	.44½	–
Butyric ether (see Ethyl butyrate).		
Butyrolactone, tanks, f.o.b. plant ... lb.	1.20	–
n-Butyronitrile, dms., c.l., dlvd .... lb.	.93	–
tanks, dlvd .... lb.	.54	–

C

Cadmium chloride, purif. cryst., 100-lb. dms., t.l., works .... lb.	3.73	–
Cadmium, CP, red, dark shade, bbls., 100-lb. lots, frt. alld., E. of Rockies .... lb.	11.33	16.35
light shade, bbls., same basis ... lb.	9.16	12.06
medium shade, bbls., same basis lb.	10.69	15.20
medium-light shade, bbls., same basis .... lb.	10.26	14.50
Cadmium, CP yellow, all shades, bbls., 100-lb. lots, frt. alld., E. of Rockies .... lb.	6.10	7.07
Cadmium fluoborate, liq. conc. dms., t.l., works, frt. equald .... lb.	2.27	–
medium-light shade, bbls., same basis .... lb.	3.22	–
Cadmium-mercury lithopone, maroon shade, bbls., frt. alld. E. of Rockies .... lb.	4.80	–
Cadmium metal ingots or sticks, ton lots, cs., dlvd .... lb.	1.20	1.60
Cadmium nitrate, purif., flake 400-lb. dms., c.l., t.l., f.o.b. ship. pt. lb.	2.10	–
Cadmium-selenide-lithopone, orange, light shade, bbls., 400-lb. lots. frt. alld. E. of Rockies .... lb.	3.97	4.00
deep shade, bbls., same basis ... lb.	4.47	4.50
Cadmium-selenide lithopone, red, dark shade, bbls., same basis. . lb.	6.77	6.80
light shade, bbls., same basis .... lb.	5.27	5.30
medium light shade, bbls., same basis .... lb.	5.72	5.75
medium shade, bbls., same basis lb.	6.37	6.40
maroon shade, bbls., same basis. lb.	7.47	–
Cadmium-selenide lithopone, yellow, all shades, bbls., same basis. . lb.	2.97	3.00
Cadmium sulfate, 50-lb. dms., any quantity, f.o.b. ship. pt. ... lb.	4.05	–
Caffeine, dom., USP, syn. cryst. anhyd., powd., 100-lb. dms., c.l., t.l., frt. alld .... lb.	6.80	–
imp., cryst., anhyd., powd., dms., 10,000 lbs. or more .... lb.	5.80	–
Calamine, USP, dms. .... lb.	1.50	1.70
Calamus oil, dms. .... lb.	26.60	35.00
Calciferol. (see Ergocalciferol).		
Calcium acetate, purif., powd., dms. t.l., works .... lb.	.87	–

Calcium carbide, std., generator size, bulk, c.l., f.o.b., works ... ton	402.00	–
Calcium carbonate, pulverized, 325-mesh, bgs., bulk, f.o.b. works .... ton	46.00	–
slurries, 54% solids, same basis .... ton	97.00	100.00
72% solids, same basis ... ton	109.27	–
quicklime, gran., ind., bulk, works .... ton	100.93	–
Calcium carbonate, coated, bgs., c.l., works .... lb.	.0830	.1600
Calcium carbonate, precip., bgs., c.l., t.l. .... ton	385.00	445.00
Calcium carbonate precip. medium, bgs., c.l., works .... ton	110.00	150.00
precip. dense. bgs., c.l., surface treated, bgs., c.l., works . ton	265.00	–
ultrafine, USP, bgs., c.l., works .... ton	217.00	225.00
Calcium chloride, conc., reg. grade, 77-80%, flake, bulk, c.l., works .... ton	153.00	–
100-lb. bgs., c.l., same basis .... ton	196.00	–
anhyd., 94-97%, flake or pellet, bulk, c.l., same basis .... ton	217.00	–
80-lb. bgs., c.l., same basis .. ton	279.00	–
brining grade, 80-lb. bags .... ton	285.00	–
Calcium chloride, liq., 100 percent basis, t.c., t.t., barge .... ton	99.75	–
45% same basis .... ton	118.00	–
Calcium chloride, USP, gran., 225-lb. dms., t.l., frt. equald .... lb.	.90	–
Calcium citrate, purif., 200-lb. dms., 10,000 lbs. or more, f.o.b. works .... lb.	3.82	–
Calcium cyanamide, indust., anhyd. dms., works .... ton	400.00	450.00
Calcium gluconate, USP powd. t.l. . lb.	1.80	–
Calcium hydride, lump, dms., 25-1,000-lb. lots, works .... lb.	10.50	13.25
Calcium hypochlorite, 100-lb. dms., truckloads ship.t. E. of Rockies .... 100 lbs.	92.40	–
Calcium hypophosphite, dms., bulk, 500 kilos or more .... kilo	13.75	14.50
Calcium iodate, FCC dms., f.o.b. works .... lb.	5.50	–
Calcium iodide, 50-kilo dms., f.o.b. works .... kilo	23.65	25.65
Calcium lactate, NF, powd., pentahydrate, dms., 24,000 lbs. or more, f.o.b. works .... lb.	2.00	–
NF, gran., trihydrate, same basis. lb.	2.10	–
special gran., dried grade, same basis .... lb.	2.80	–
Calcium naphthenate, liq., 4% Ca., c.l., f.o.b. plant, E. of Rockies .. lb.	.85	–
d-Calcium pantothenate, USP, 100-500-kilo lots .... kilo	12.50	–
dl-Calcium pantothenate, feed grade, f.o.b. frt. alld., 250 kilos or more .... kilo	8.00	8.50
dl-Calcium pantothenate, calcium chloride complex, feed grade, 160 grams per lb., f.o.b., frt. alld., 500 lbs or more .... lb.	2.75	–
Calcium phosphate, dibasic, feed grade, 18½% P. bulk, c.l., t.l., f.o.b. works .... ton	228.00	–
Calcium phosphate, dibasic, dihydrate, USP, bgs., c.l., t.l., works, frt. equald .... 100 lbs.	62.50	–
anhyd., USP, same basis. . 100 lbs.	71.75	–
dentifrice grade, same basis. 100 lbs.	49.90	–
Calcium phosphate, monobasic, monohydrate, food grade, bgs., c.l., t.l., works, frt. equald .... 100 lbs.	50.50	–
anhyd., food grade, same basis .... 100 lbs.	54.95	–
tribasic, NF precip., bgs., c.l., frt. equald .... 100 lbs.	62.50	–
Calcium propionate, dms., 2,000 lbs. or more f.o.b. frt. alld. .... lb.	.50	.55
Calcium silicate, hydrated, bgs., c.l., works .... lb.	.07	–
Calcium silicate, paint grade (see Wollastonite).		
Calomel, NF, mild powd., 100-lb. dms., f.o.b. works .... lb.	8.50	–
Camphene chlorinated, 67-69% (see Toxaphene).		
Camphor, monobromated, dms., kgs .... lb.	3.63	3.70
Camphor, syn., tech., 165-lb. dms., 5,000 lbs. or more .... lb.	1.80	–
USP, powd., 165-lb. dms., 5,000 lb. lots or more .... lb.	2.36	–
syn., refd., 1-oz. tablets, ctns. 1,000-lb. lots or more .... lb.	3.50	–
Camphor oil, yellow, 25-lb. dms ... lb.	1.65	–
white, dms. .... lb.	2.00	–
spec. grav., 1.070, dms. .... lb.	2.65	2.85
Cananga oil, Indonesian, dms. ... kilo	17.50	–
Candelilla wax, crude, bgs .... lb.	1.90	–
refd. pure, bgs. .... lb.	2.10	–
Capric acid, coml, pure, dms .... lb.	.60	.65
tanks .... lb.	.60	.65
Capric aldehyde (aldehyde C-10) dms., cns. .... lb.	3.95	5.35
Caprolactam monomer, flake, bgs., t.l., f.o.b. shipping point .... lb.	.87	–
molten, tanks, same basis .... lb.	.85	–
Capryl alcohol sec. 92-99% tanks, f.o.b. works .... lb.	.35	–
Caprylic acid, coml. pure tanks .... lb.	.73½	–
Capsicum (see Pepper, red).		
Capsicum oil (see Capsicum oleoresin).		
Capsicum oleoresin, NF, from dom., pepper, dms. .... lb.	11.00	–
NF, from African pepper, dms. 500,000 pungency .... lb.	9.00	–
1,000,000 pungency .... lb.	17.00	18.00
Caraway oil, Poland, dms .... lb.	22.00	25.00
Caraway seed, Dutch, bgs .... lb.	.54	–
Egyptian, bgs .... lb.	.50	.53
Carbon black, furnace, fast extruding (FEF), bulk, c.l., works .... lb.	.2125	–
bgs., c.l., works .... lb.	.2425	–
general purpose (GPP), bulk, c.l., works .... lb.	.2075	–
bgs., c.l. works .... lb.	.2375	–
high abrasion (HAF), high structure, bulk, c.l. works .... lb.	.2300	–
bgs., c.l., works .... lb.	.2600	–

CHEMICAL PRICES

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Carbon black, low structure, bulk, c.l. works .... lb.	.240	.260
bags, c.l. works .... lb.	.270	.290
intermediate-super-abrasion (ISAF) .... lb.	.25	–
bgs., c.l. works .... lb.	.28	–
super-abrasion (SAF), bulk, c.l., works .... lb.	.31	–
bgs., c.l., works .... lb.	.4060	–
semi-reinforcing (SRF), bulk, c.l., works .... lb.	.210	–
bgs., c.l., works .... lb.	.240	–
Carbon black, thermal, medium, bgs. c.l., works .... lb.	.30	.30½
bulk, c.l. works .... lb.	.32	.34½
Carbon black oil, barge, f.o.b. Gulf refineries .... bbls.	10.50	12.50
f.o.b. W. coast refineries .... bbls.	10.50	12.50
Carbon disulfide, t.c., f.o.b. works ton	420.00	–
Carbon tetrachloride, CP, consumers, dms., c.l., frt. alld .... lb.	.36	–
tech., dms., c.l., t.l., frt. alld .... lb.	.31	–
tank transport (min. 4,000 gals.) frt. alld .... lb.	.24	–
Carboxymethyl cellulose (see CMC).		
Cardamom oil, NF, bots .... lb.	60.00	–
Cardamoms, decort, Guatemalan. . lb.	2.90	–
green, Guatemalan, bgs .... lb.	5.75	7.50
Carmine, No. 40, NF, bulk, 100-lb. lots or more, dlvd .... lb.	135.00	140.00
Carnauba wax, Parnahyba, No. 1, yellow, bgs., ton lots .... lb.	1.95	2.05
Ceara, No. 1, yellow, bgs., ton lots .... lb.	1.75	1.90
North Country, No. 2, refined, bgs., ton lots .... lb.	1.55	1.65
Carnauba wax, North Country No. 3, centrifuged, bgs., ton lots . lb	1.10	–
North Country, No. 3, refined, bgs., ton lots .... lb.	1.30	1.45
Powdered carnauba wax, 20 to 100 mesh, 20c. per lb. higher.		
b-Carotene, in vegetable oil, semi-solid suspension, 400,000 A units per gram, 33 lbs. or more.. lb	32.75	–
b-Carotene, liq. in vegetable oil, 500,000 A units per gram, 33 lbs. or more .... lb.	40.75	–
b-Carotene, dry, beads, 10%, 167,000 A units per gram 50-lb. cns lb.	26.85	–
d-Carvone, 25-lb. dms., syn. .... lb.	48.00	–
l-Carvone .... lb.	7.00	7.25
Cascara sagrada bark, bulk .... lb	1.00	–
Casein, imp., acid-precip., grd., 30-mesh, Australian, edible, same basis. c.i.f. .... lb.	1.45	–
Australian, indust., same basis. c.i.f. .... lb.	1.365	–
Cassella acid, 303 mol. wt., dms., frt. alld., 100% basis .... lb.	3.70	–
Cassia, Korintji "A" bgs .... lb.	1.08	1.20
"B" bgs .... lb.	.95	1.00
Cassia oil, Chinese, dms .... lb.	18.50	–
Castor oil, raw, No. 1, Braz. tanks. . lb.	.32	.34
USP 5-9 dms .... lb.	.74	–
refd. deod., 5-9 dms .... lb.	.78	–
blown, 5-9 dms .... lb.	.75	–
dehydrated, bodied, tanks .... lb	.74	–
dehydrated, unbodied, tanks .... lb.	.65	–
Castor oil, acids dehydrated, dms. . lb.	1.10	–
ricinoleic acid .... lb.	.79½	.83
Castor pomace, bgs., container load, f.o.b., Miami, Fla. .... ton	154.00	–
Castoreum, nat., cns. .... lb.	18.00	35.00
syn., cns. .... lb.	11.00	–
Catechol, CP, 45-kilo dms., 50-239 dms., f.o.b. .... kilo.	7.93	–
tech., bgs., t.l., same basis .... kilo.	3.71	–
Caustic potash (see Potash, caustic).		
Caustic soda (see Soda, caustic).		
Cedarleaf oil, dms .... lb.	17.50	–
Cedarwood oil, Texas, dms., cns ... lb.	1.75	2.50
Virginia .... lb.	4.75	–
Cedrol, prime dms .... lb.	5.25	–
Cedryl acetate, dist., dms .... lb.	4.25	5.30
Celery seed, Indian, bgs .... lb.	.48	–
Celery seed oil .... lb.	37.00	–
Cellulose acetate, powd., bgs., t.l., dlvd. E. .... lb.	1.30	–
Cellulose acetate butyrate, powd., 17% butryl content, bgs., t.l., dlvd. E. .... lb.	1.75	–
38% butryl content, bgs., dlvd. E. . lb.	1.59	–
50% butryl content, bgs., dlvd. E. . lb.	1.81	–
55% butryl content, bgs., dlvd. E. . lb.	1.63	–
Cellulose gum, pure, high vis., bgs., 24,000-lb. lots or more works, f.o.b. Hopewell, Va. .... lb.	1.60	1.70
std., low or medium vis., bgs., c.l., t.l., f.o.b. Hopewell, Va. ... lb.	1.60	1.90
Cerium concentrate CeO_2, 50 lbs. .. lb.	1.35	–
Cerium hydroxide 90% CeO_2, dms., works .... lb.	5.40	–
77% CeO_2, dms., works .... lb.	4.20	1.60
Cerium oxide, optical grade, bgs., 50-lb. lots or more, dlvd .... lb.	1.85	1.90
Cetyl alcohol, NF, cns., c.l., t.l., dlvd. E. lb.	.68½	1.27
Chalk (see Calcium carbonate).		
Chamomile flowers, Hungarian, cs. . lb.	4.25	4.50
Roman, cs. .... lb.	4.94	–
Egyptian, whole .... lb.	2.70	3.00
Chamomile oil, blue, Egyptian .... lb.	545.00	–
blue, Hungarian .... lb.	370.90	–
Chenopodium oil, NF, cns .... lb.	15.00	–
Chicago acid, dry, bbls., frt. alld ... lb.	13.50	–
Chilies (see Pepper, red).		
Chlorendic anhydride, tech., dms., t.l., works .... lb.	1.30	–
Chlorinated paraffin, 40% chlorine, bulk, dlvd., Zone 1 .... lb.	.45	.46½
50% chlorine, same basis .... lb.	.46	.47½
60% chlorine, same basis .... lb.	.46½	.48½
70% chlorine, resinous, 50-lb. bgs., c.l., dlvd., Zone 1 .... lb.	.69	–

CHEMICAL PRICES

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Chlorinated paraffin, Zone 2 prices are 1c. per lb. higher and Zone 3 prices are 2c per lb. higher and t.l. drum prices are 5c per lb. higher

Chlorinated rubber, 5, 10, 20 cps., bgs., t.l., divd. lb.	1.66	–
40 cps, bgs., t.l., divd. lb.	1.92	–
125 cps., bgs., t.l., divd. lb.	2.60	–
300 cps., bgs., t.l., divd. lb.	2.75	–
Chlorine, tanks single units works, f.o.b., frt. equald. ton	195.00	200.00
Chloroacetic acid, mono, high purity, flake, 99% bulk f.o.b. works lb.	.56	–
2-Chloro-4-aminotoluene, tech., liq., dms., c.l., t.l., f.o.b. works lb.	1.88	–
o-Chloroaniline, liquid, dms., c.l., f.o.b. works lb.	1.63	–
tanks, same basis lb.	1.55	–
p-Chloroaniline, solid, c.l., t.l., f.o.b. lb.	1.70	–
flake, dms., c.l., same basis lb.	2.00	–
o-Chlorobenzaldehyde, dms., t.l., works lb.	2.45	–
p-Chlorobenzaldehyde, dms., 2,000 lbs. or more, works lb.	3.84	3.85
o-Chlorobenzoic acid, dms. t.l. wks. lb.	3.90	–
p-Chlorobenzoic acid, dms., 500-lb. lots or more, works lb.	1.69	2.25
Chloroform, tech. tanks, distr. divd. lb.	.34½	–
tech., consumers, tanks, divd. lb.	.34½	–
NF tanks, min., consumer, 4,000 gals. divd. lb.	.35½	–
2-Chloro-4-nitroaniline, paste, commodity basis, dms., t.l., f.o.b. lb.	3.06	–
powd., same basis lb.	3.16	–
4-Chloro-2-nitroaniline, paste, 172.5 mol. wt., commodity basis, dms., t.l., f.o.b. lb.	2.26	–
powd., same basis lb.	2.70	–
o-Chlorophenol, dms., c.l., frt. equald. lb.	2.00	2.40
p-Chlorophenol, dms., c.l., frt. equald. lb.	1.25	1.70
Chloropicrin, coml., 1,500-lb. cyls., t.l., f.o.b. works lb.	1.25	–
Chlorosulfonic acid, tanks, frt. equald. lb.	.18½	–
p-Chlorotoluene, tech., tanks, works lb.	1.00	–
Cholecalciferol, dry, 40,000,000 units per gram, kilo lots gm.	24.00	–
Choline bitartrate, cryst., 98% min., 50 kilo dms., f.o.b. Springfield, Mo. kilo.	6.90	–
Choline chloride, feed grade, 70% aqueous, t.c., t.l., divd. E of Rockies lb.	.28	–
60% dry supplement lb.	.39	–
Choline chloride, 60% dry supplement, bulk hopper cars lb.	.39	–
bgs., 50,000 lbs. min. lb.	.40	–
Choline chloride, pharmaceutical, 50 kilo, lots, f.o.b. Springfield, Mo. kilo.	5.00	–
Choline dihydrogen citrate, 98% min., 50 kilo lots, f.o.b. Springfield, Mo. kilo.	8.00	–
Chrome green, CP extra light, bgs., divd. E. of Rockies lb.	1.68	–
light, bgs., same basis lb.	1.70	–
medium, bgs., same basis lb.	1.72	–
extra deep, CP., same basis lb.	1.74	–
Chrome orange, CP, bgs., divd. E. of Rockies lb.	.83	.89
Chrome yellow CP bbls., divd. E. of Rockies lb.	1.09	1.18
Chromic acid, 99¾%, flake dms., c.l., frt. equald. lb.	1.18	–
grd., same basis lb.	1.25	–
Chromium acetate, soln. 7½%, dms., 500-2,000-lb. lots, works lb.	.10	–
Chromium fluoride, dms., t.l., works lb.	.81	–
Chromium nitrate, dms., t.l., f.o.b. lb.	1.45	–
10% metal soln., 500-lb. dms. same basis lb.	.74	.88
Chromium oxide, hydrated, 50-lb. bgs., c.l. lb.	5.50	–
pure, bgs., c.l. lb.	1.90	2.00
Cinnamic aldehyde, cns., dms. lb.	1.85	1.95
Cinnamic alcohol, 25-lb. cns. lb.	4.50	–
Cinnamon, H2 lb.	.95	1.00
Cinnamon bark oil, bots. lb.	105.00	110.00
Cinnamon leaf oil, dms. lb.	2.75	–
Citral, nat., dms. lb.	5.50	6.65
syn., 55-gal. dms. f.o.b. lb.	3.16	–
Citric acid, USP, hydrous, gran., 250-lb. dms., t.l. lb.	1.19	–
Citric acid, USP, anhyd., gran. 250-lb. dms., t.l., del. lb.	.86	–
Citric acid anhyde, powder 5c. higher		
Citronella oil, Java, dms lb.	2.60	–
China, dms. lb.	2.60	–
Citronellal, 25-lb cans lb.	3.85	7.40
Citronellol drums, f.o.b. lb.	3.68	–
Citronellyl acetate, dms. lb.	5.50	6.50
Citronellyl formate, 25-lb. cns lb.	6.85	–
Civet, artif., bots. lb.	20.00	–
nat. lb.	400.00	–
Clay ball, dom air floated, bgs., c.l., Tenn. ton	49.00	–
dom., crushed, moisture-repellent, bulk, c.l., Tenn. ton	24.00	–
Clay China (see Kaolin).		
Cleaners, naphtha, 140° flash tanks., New Jersey or New York, divd gal.	1.40	–
Clove leaf oil Indonesian, reg. dms. kilo	3.15	–
Madagascar, reg. kilo	3.40	–
Clove bud oil kilo	25.00	26.00
Cloves, Brazil lb.	2.30	–
Zanzibar lb.	2.30	–
Madagascar lb.	2.30	–

CMC, technical, 98% minimum, low or medium vis., bgs., 24,000 lbs., f.o.b. Hopewell, Va., 100% basis lb.	1.25	–
detergent makers, f.o.b. manufacturing point lb.	.64	–
CMC, purif., high vis., (see Cellulose gum).		
Coaltar pitch, indust., liq., works ton	250.00	255.00
roofing, 140–155, Federal specification RP-381 Type 1, bulk works ton	350.00	–
Cobalt acetate, dms., t.l., frt. alld. lb.	3.61	4.25
Cobalt carbonate, powd., dms., frt. alld. lb.	6.61	8.16
Cobalt chloride, dms., 5,000 lbs. or more, ft. equald. lb.	4.15	–
Cobalt hydrate, dms., t.l., frt. alld. lb.	8.20	10.55
Cobalt metal, 99.5-99.9%, 250-kilo. dms., f.o.b. NY, Chicago. lb.	11.70	–
Cobalt naphthenate, liq., 6% Co., dms., divd. lb.	2.06	–
Cobalt nitrate, dms., t.l., frt. alld. lb.	2.74	3.45
Cobalt oxide, Imp., black, 72-73% Co. lb.	9.51	–
Cobalt oxide, imp., 70-71% Co. lb.	9.78	–
Cobalt phosphate powd. 32.1% Co., dms., divd. lb.	1.35	–
Cobalt resinate fused, 3% Co., dms. lb.	.38½	–
Cobalt sulfate, cryst., bgs., 10,000 lbs. or more, frt. alld. E lb.	2.81	3.54
monohydrate, dms., frt. alld. lb.	4.56	6.02
Cobalt tallate, 6% Co., dms., divd. lb.	2.16	–
Cocillana bark, bls. lb.	.40	.45
Cocoa butter, spot lb.	2.05	–
Coconut oil (See Oils, Fats & Waxes market report.).		
Coconut oil acids, distilled, t.c., f.o.b. lb.	.52	.58
double distilled, same basis lb.	.54	.63
Cod oil, f.o.b., Gloucester, Mass., bulk gal.	6.60	–
Codeine alkaloid, NF, 25-kilo lots, kilo.	900.00	–
Codeine phosphate, USP, cns., 25-kilo lots kilo	640.00	–
Codeine sulfate, NF cns., 25-kilo lots kilo	775.00	–
Codliver oil, NF, dms gal.	6.50	7.25
Copaiba balsam, dms lb.	1.50	–
Copaiba oil, cns., dms lb.	3.75	–
Copper acetate, monohydrate, cryst., tech., dms., t.l., works lb.	.71	.74
Copper bromide, (cupric) 200-lb. dms., 100,000-lbs. -per-year contracts, works lb.	1.34	–
Copper carbonate, 55% Cu, dark, dense, 50-lb. bgs., c.l., t.l., works 100 lbs.	108.30	–
light, fluffy, 50 lb. bags, c.l., t.l., works 100 lbs.	109.30	–
Copper chloride (cupric), anhyd., c.l., works lb.	.90	–
Copper cyanide, tech. dms., 24,000-lb. lots or more lb.	2.30	2.62
Copper fluoborate, (cupric), liq. conc., dms., t.l., works, frt. equald. lb.	.82	–
Copper gluconate, FCC grade, 25-lb. dm., frt. equald. lb.	6.50	–
Copper metal electrolytic wire bars, divd., domestic, basis lb.	.62½	–
Copper naphthenate, liq., 8% Cu., dms., frt. alld. lb.	1.19	–
Copper nitrate (cupric), purif., flake, dms., t.l., works lb.	.43¼	–
Copper oleate, solid, 6% Cu. dms., works frt alld. lb.	.97	–
Copper oxide, black (cupric), dms., 80,000-lb. lots, works lb.	1.21	–
red (cuprous), dms., 97%, USN Type 1, (AA), 80,000-lb. lots, works lb.	1.19	1.20
red, 90%, Type 2, same basis lb.	1.15	–
Copper-8-quinolinolate, 10%, liq. emulsion, t.l., divd lb.	2.52	–
Copper sulfate, cryst., pentahydrate, 99% bgs., c.l., f.o.b. works 100 lbs.	46.45	–
CP, pentahydrate, cryst., dms., l.c.l., works 100 lbs.	60.00	–
monohydrated, 35% Cu, dms., c.l., works 100 lbs.	76.10	–
basic, bgs., c.l., works 100 lbs.	86.30	–
Coriander oil, USP, dms lb.	32.00	34.00
Coriander seed Moroccan lb.	.38	–
Rumanian lb.	.36	.37
Corn oil (See Oils, Fats & Waxes market report).		
Corn oil, crude, foots (soapstock), 95% acid; New York lb.	.13½	.14
Corn oil acid, dms lb.	.50	–
tanks lb.	.32	.40
Corn syrup 43 Be., tanks, f.o.b. works 100 lbs.	11.22	11.43
Cortisone acetate, USP, dms., 5 kilos or more gram.	.80	–
Cottonseed meal (See Oils, Fats & Waxes market report.)		
Cottonseed oil (See Oils, Fats & Waxes market report.)		
Cottonseed oil, acidulated (soap stock), acid, 95%, tanks, N.Y. lb.	.13	–
Cottonseed oil acids, dist., dms lb.	.63	–
tanks lb.	.55	–
Coumarin, NF X, cryst., over 600-lb. lots lb.	6.00	6.20
Cream of tartar (see Potassium bitartrate).		
Creosote, coaltar, grade 1, tanks, f.o.b. works gal.	1.15	1.18
soln., 80/20, tanks, same basis. gal.	1.134	1.17
p-Cresidine, fused, dms., works lb.	4.31	–
m-Cresol, 95-98%, dms., t.l., f.o.b. lb.	1.71	–
tanks, same basis lb.	1.65	–
m,p-Cresol, 99%, dms., t.l., f.o.b. lb.	.94	–
bulk, same basis lb.	.82	–
o-Cresol, 99% pure, dms., t.l., f.o.b. lb.	.87	–
bulk, same basis lb.	.75	–
98% pure, dms., t.l., f.o.b. lb.	.87	–
bulk, same basis lb.	.75	–
p-Cresol, 98%, dms., t.l., f.o.b. lb.	1.22	–
bulk, same basis lb.	.95	1.15
Cresylic acid, coaltar, dom., metapara content above 25%, resin and tricresyl phosphate grades, tanks, frt. alld. lb.	.58	–
Cresylic acid, dom., metapara content 25% or less, tanks, frt. alld. lb.	.56	–
Crotonic acid, 200-lb. dms., t.l., f.o.b. divd. lb.	1.50	–
Cryolite syn., bulk, c.l., works ton	510.00	550.00

Cuberoot, powd., 5% rotenone, basis, 50-lb. bgs., t.l., works lb.	.60	–
Cumene, bulk, contract, f.o.b. lb.	.14½	.14¾
Cumin seed, Indian, bgs. lb.	.95	–
Iranian, bgs lb.	.99	–
Cyanuric acid, dms., c.l., t.l. frt. equald. lb.	1.16	1.37
Cyclamen aldehyde, 50% min. aldehyde content, dms. lb.	4.85	–
98.5%, dms. lb.	7.35	9.20
90-92%, dms. lb.	7.85	–
Cyclohexane, bulk, barges, wks gal.	.9825	.9925
Cyclohexanol tech., tanks, f.o.b. lb.	.52	.66½
Cyclohexanone tech., tanks, f.o.b. works lb.	.55½	.58½
tanks, divd. lb.	.565	–
Cyclohexylamine, tech., tanks, works lb.	.85	–

D

2,4-D acid, tech., 50-lb. bgs., c.l., t.l., works, frt. equald. lb.	1.10	1.25
2,4-D butyl ester, tech., 55-gal. dms., c.l., t.l., works, frt. equald. lb.	1.30	–
tanks, same basis lb.	1.25	–
2,4-D dimethylamine salt, t.c., t.l. works, frt. alld. gal.	6.05	–
Decyl alcohol, mixed isomers, tanks, divd. lb.	.32	–
perfume grade, dms. lb.	.75	–
Defluorinated phosphate (tricalcium), feed grade, 18% P, c.l., bulk, f.o.b. works ton	195.00	228.00
Denatured alcohol, ethyl, CD18, CD19, tanks, divd. E. gal.	1.87	–
NOTE: Tankcar sales require written authorization by Alcohol and Tobacco Tax Division.		
Denatured alcohol, ethyl,		
SD2B, tanks, divd. E. gal.	1.81	–
SD3A, tanks, divd. E. gal.	1.76½	–
SD23A, tanks, divd. E. gal.	1.86	–
SD23H, tanks, divd. E. gal.	1.89	–
SD29, tanks, divd. E. gal.	1.83	–
SD30, tanks, divd. E. gal.	1.72½	–
SD35A, tanks, divd. E. gal.	1.88½	–
Denatured alcohol, ethyl, brucine formula SD40, tanks, divd. E. gal.	1.83	–
ethyl, optional formula, SD40, tanks, divd. E. gal.	1.82½	–
For anhyd. alcohol on above formulas, prices are 12c. per gal. higher.		
West Coast divd. prices are the same as Eastern prices, except in Idaho, Oregon and Washington where a 5c. differential on tankcars is maintained.		
Desoxyephedrine hydrochloride (See Methamphetamine hydrochloride)		
Detergent alkylate, straight chain dodecylbenzene, tanks, barges, f.o.b. lb.	.45	–
Dextrin, corn, canary dark, paper bgs., c.l., works 100 lbs.	28.04	–
white, paper bgs., c.l., works 100 lbs.	27.43	–
Dextrose, anhyd., coml., bgs., c.l., divd. New York 100 lbs.	41.10	–
USP special, 100-lb. bgs., c.l., divd. New York 100 lbs.	46.50	–
Dextrose, hydrated coml, bgs., c.l., divd. New York 100 lbs.	24.25	–
Western zone 100 lbs.	25.60	–
Diacetone alcohol, acetone free, tanks, divd. lb.	.52	–
Diacetyl, flavor grade, dms. lb.	9.25	15.00
Diammonium phosphate, fert. grade. min. 18% N, 46% P. bulk, c.l., f.o.b. Fla. works ton	140.00	145.00
Diammonium phosphate, feed grade, 18% N, 20% P, bulk. c.l., f.o.b. Fla. works ton	240.00	–
bgs., same basis ton	250.00	–
Diammonium phosphate, tech., bgs., c.l., t.l., works, frt. equald. 100 lbs.	52.50	–
food grade, bgs., c.l., t.l., same basis 100 lbs.	57.75	–
2,4-Di-tert-amylphenol, min. 95.5%, dms., c.l., t.l., works lb.	1.04	–
tanks, works lb.	.97	–
Diarylide yellow, OT, (yellow 14), dms., frt. alld. lb.	7.00	8.00
o-Dianisidine dihydrochloride, 100%, MW 244, dms., t.l., divd. lb.	4.25	–
2,6-Di-tert-Butyl-p-Cresol (see Butylated hydroxytoluene)		
Dibutyl fumarate, tanks, f.o.b. works lb.	.77	.85
Dibutyl maleate tanks, f.o.b. works lb.	.63	.64
Dibutyl phthalate, tanks, works lb.	.54	.60
Dibutyl sebacate tanks, works lb.	1.72	1.89
Dibutylamine, dms., c.l., divd. lb.	1.12	–
tanks, same basis lb.	1.06	–
2-5-Dichloroaniline, flake, dms., works lb.	2.00	–
fused, dms., works lb.	1.80	–
3,4-Dichloroaniline, tech. 98%, solid, dms., c.l., t.l., f.o.b. works lb.	1.46	1.57
o-Dichlorobenzene, tech., 80%, dms., c.l., t.l., divd. lb.	.52	–
tanks, same basis lb.	.46	–
98% refd., dms., c.l., same basis lb.	.54	–
tanks, same basis lb.	.47	–
p-Dichlorobenzene, graded, 300-lb. dms., t.l., f.o.b., frt. equald. lb.	.51	.52
tanks, liq., same basis lb.	.43	.47
2,6-Dichloro-4-nitroaniline, dms., 10,000 lbs. or more, works lb.	3.30	–
Dichlorophenoxyacetic acid (see 2,4-D).		
Dicyclohexylamine, dms., c.l., t.l., f.o.b. lb.	1.35	–
tanks, same basis lb.	1.25	–
Dicyclohexyl phthalate, bgs., c.l., t.l., divd. lb.	1.25	–
Dicyclopentadiene, high-purity, 97-98%, tanks, works lb.	.35	–
Diethanolamine, tanks, frt. alld. lb.	.34	.36
Diethanolamine lauryl sulfate, tanks, frt. alld. lb.	.41	–
DDVP (see Dimethyl dichlorovinyl phosphate).		
Diethyl barbituric acid (see Barbital).		

Diethyl carbonate, tankwagons, f.o.b. works lb.	1.40	–
Diethyl ethanolamine, CP dms., c.l., divd. lb.	1.18	–
tanks, divd. lb.	1.10	–
Diethyl ethanolamine tech., 8c. per lb. lower.		
Diethyl oxalate, dms., c.l., f.o.b. works lb.	1.80	–
Diethyl phthalate, tanks, f.o.b. lb.	.69	.88
odorless cosmetic grades, t.l., works lb.	.97½	–
Diethyl sulfate, tanks., frt. alld. E. lb.	.59	–
Diethyl thiourea, dms., c.l., t.l., works lb.	2.48	–
Di-2-ethylhexyl adipate (see Dioctyl adipate).		
Diethyl toluamide, 95-97% min. meta isomer, dms., t.l., f.o.b. works lb.	2.75	–
N,N-Diethyl-m-toluidine, tech., liq., dms., c.l., f.o.b. lb.	3.18	–
tanks, same basis lb.	3.10	–
Diethylamine, dms., c.l., divd. lb.	1.16	–
tanks, same basis lb.	1.02	–
N,N-Diethylaniline, dms., c.l., t.l., f.o.b. works lb.	1.83	–
tanks same basis lb.	1.75	–
Diethylbenzene, tanks, f.o.b. works lb.	.98	–
Di-2-ethylhexyl azelate (see Dioctyl azelate).		
Di-2-ethylhexyl phthalate (see Dioctyl phthalate).		
Diethylene glycol, tanks, divd. E. lb.	.29½	.31½
Diethylene glycol monobutyl ether, dms., c.l., frt. alld. E. lb.	.65	–
tanks, frt. alld. E. lb.	.57	–
Diethylene glycol monoethyl ether, dms., c.l., frt. alld. E. lb.	.64	–
tanks, frt. alld. E. lb.	.56	–
Diethylene glycol monomethyl ether, dms., c.l., frt. alld. lb.	.62	–
tanks, frt. alld. lb.	.54	–
Diethylene glycol monobutyl ether acetate, dms., c.l., divd. E. lb.	.80	–
tanks, divd. E. lb.	.72	–
Diethylene glycol monoethyl ether acetate, dms., c.l., frt. alld. E. lb.	.80	–
tanks, frt. alld. lb.	.72	–
Diethylenetriamine, tanks, f.o.b. works lb.	1.60	1.61
Diethylenetriamine pentaacetic acid, pentasodium salt solution, tank- cars/tanktrucks, frt-equalized lb.	.45	–
Digitoxin, USP, imp., bots. gram	2.80	3.00
Diglycol laurate, dms., ton lots lb.	.32½	–
Diglycol stearate, dms., t.l. lb.	.62	.73
Dihydrazine sulfate, dms., works lb.	1.10	1.25
Dihydrostreptomycin sulfate, bulk kilo.	48.00	–
Dihydroxyacetone, 50-kilo lots, works kilo.	40.00	–
Di-isobutyl ketone, tanks, divd. lb.	.60	–
Di-isobutyl phthalate tanks, divd. E. lb.	.55	.57
Di-isobutylene, tanks, f.o.b. Houston lb.	.37	–
Di-isodecyl phthalate, tanks, divd. lb.	.40	.40½
Di-isononyl phthalate, tanks, divd. lb.	.40	–
Di-iso-octyl azelate, tanks, divd. E. lb.	.99	1.07
Di-iso-octyl phthalate, tanks, divd. lb.	.40	–
Di-isopropanolamine, dms., c.l., frt. alld. lb.	.66½	–
tanks, same basis lb.	.58½	–
Di-isopropylamine, dms., c.l. divd. lb.	1.17	–
tanks, same basis lb.	1.07	–
Dilauryl 3,3-thiodipropionate, dms., t.l., frt. alld. lb.	1.89	–
Dill oil, USP, dms. lb.	7.00	8.25
Dimethyl anthranilate, dms. lb.	15.80	–
Dimethyl benzyl carbinyl acetate, 25-lb. dms. lb.	6.95	–
Dimethyl carbonate, dms, t.l., f.o.b. works	.90	–
Dimethyl dichlorovinyl phosphate, 55-gal. dms., f.o.b. lb.	1.80	1.90
Dimethyl ethanolamine, anhyd., dms., c.l., divd. E. lb.	1.15	1.18
tanks, divd. E. lb.	1.07	1.10
Dimethyl ether, aerosol grade, tanks, divd. lb.	.38	–
Dimethyl phthalate, tanks, f.o.b works lb.	.65	–
Dimethyl sebacate, tanks, f.o.b works lb.	2.48	2.68
Dimethyl sulfate, ref. dms., c.l., f.o.b. works lb.	.57	–
tanks, lb.	.46	–
Dimethyl sulfide, tanks, works lb.	.59	–
Dimethyl sulfoxide, tanks, works lb.	.78	–
Dimethylacetamide, bulk f.o.b. lb.	.87½	–
Dimethylamine, 25% soln., tanks, frt. equald., 100% basis lb.	.63½	–
40% soln., tanks, frt. equald., 100% basis lb.	.63½	–
anhyd., tanks, frt. equald. lb.	.54½	–
N,N-Dimethylaniline, t.l., f.o.b. lb.	1.03	–
t.l. dms. lb.	1.11	–
N,N-Dimethylformamide, dms., c.l., t.l., f.o.b., works lb.	.57	–
tanks, same basis lb.	.49	–
2,4-Dinitroaniline. tons-lots, f.o.b. lb.	1.22	–
Dinitroaniline, orange toner, CP, bgs., divd. E. of Rockies lb.	5.20	–
2,4-Dinitrochlorobenzene, crystallizing at 47°, t.l., f.o.b. Charlotte, N.C. lb.	.98	–
2,4-Dinitrophenol, 250-lb. dms., f.o.b. Charlotte, N.C. lb.	1.95	–
Dinitrotoluene, mix., tech. f.o.b. works lb.	.30	.43
2,4-Dinitrotoluene, dms., c.l., t.l., works lb.	1.25	–
tanks, works lb.	1.20	–
Dioctyl adipate, tanks, frt. alld. E. lb.	.61	.70
Dioctyl azelate, tanks, divd. E. lb.	.99	1.04
Dioctyl phthalate, tanks, divd. lb.	.40	.45
Dioctyl sebacate, 99%, tanks, f.o.b. works lb.	1.47	–
1,4-Dioxane, tanks, frt. alld. E. lb.	1.13	–
t.l., same basis lb.	1.21	–
Dipentaerythritol, bgs., c.l., t.l., divd. E. lb.	1.42	–
Dipentene steam-dist., tanks, f.o.b. lb.	.25	.39
Fla. works lb.	.25	.28
sulfate turpentine derived, tanks lb.		
Dip oil (see Tar acid oil).		
Diphenhydramine hydrochloride, USP, dom., 1,000-kilo lots, dms., divd. kilo.	20.00	24.00
Diphenyl, 99.9%, bgs., c.l., t.l., works lb.	.74	–
tanks, works lb.	.65	–

Diphenyl oxide, tech. grade, tanks lb.	1.11	1.20
Diphenylamine, refd., flake, bgs., t.l., works, frt. equald. lb.	1.25	–
molten, tanks, works lb.	1.00	–
octylated, flake, bgs., t.l., f.o.b. works	7.68	–
Diphenylguanidine, bgs., t.l., frt. alld. lb.	2.52	
Diphenylhydantoin-sodium USP, dms. lb.	5.00	5.60
Diphenylmethane 4,4,-di-isocyanate, polymeric, bulk, c.l., min. frt. alld. lb.	.91	–
Dipropylene glycol, tanks, frt. alld. lb.	.45	–
Dipropylene glycol monomethyl ether, dms., c.l., divd. lb.	.54	–
tanks, same basis lb.	.46	–
Di-o-tolylguanidine, powd., dms., t.l., frt. alld. lb.	2.92	–
Di-o-tolylthiourea, tech., solid, dms., t.l., frt. alld. lb.	3.11	–
Ditridecyl phthalate, tanks, divd. lb.	.64	.65
Diundecyl phthalate, tanks, divd. lb.	.61	.65
Divinylbenzene, 100% basis, tanks works lb.	2.75	2.60
dms, 100% basis lb.	3.00	2.70
Dodecanol, syn., tanks, f.o.b. lb.	.76½	–
Dodecenyl succinic anhydride, dms., c.l., t.l., divd. lb.	.88	–
Dodecylbenzene (see Detergent Alkylate).		
Dodecylphenol, tanks, min. frt. alld. E lb.	.48	.53
Dyes, coaltar, certified colors for food, drugs and cosmetics, 100 lb. and over. frt. prepaid or alld.		
Blue, FD&C, No. 1 lb.	21.20	22.60
No. 2 lb.	29.15	29.22
Green, FD&C, No. 3 lb.	49.50	65.00
Red, FD&C, No. 3 lb.	24.00	24.50
Yellow, FD&C, No. 5 lb.	7.45	7.85
No. 6 lb.	6.45	6.75
Dyes, coaltar, certified colors for drugs and cosmetics. 100-lb. lots divd.		
Green, D&C, No. 6 lb.	38.50	–
No. 8 lb.	42.80	–
Red, D&C, No. 4 lb.	18.85	–
No. 17 lb.	38.90	–
No. 19 lb.	38.25	–
No. 22 lb.	12.45	–
No. 28 lb.	59.95	–
No. 33 lb.	48.95	–
Yellow, D&C, No. 7 lb.	21.00	–
No. 8 lb.	20.55	–
No. 10 lb.	48.80	48.85
No. 11 lb.	35.25	–
Dyes, coaltar, for general use in cloth and paper dyeing (by Color Index Name). f.o.b. works		
ABk 1 Blue black ex. conc. lb.	5.75	–
Dyes, AB 9 Blue 2G lb.	5.46	–
AB 45 Alizarine Blu SAP 150% lb.	19.85	–
AB 90 Alizarine Br. Cy G lb.	14.13	–
AB 113 Navy 5R lb.	6.55	–
AGr 16 Gast 2G 333% lb.	22.12	–
AOr 7 II lb.	3.72	–
AOr 8 RO Ex. Conc. lb.	4.00	–
AOr 10 Wool Or G lb.	4.30	–
AOr 74 Metallized Or GNA lb.	6.15	–
AR 2G lb.	5.13	–
AR 14 Azo Rubine 133% lb.	8.85	–
AR 18 Scarlet 4R Conc. lb.	5.45	–
AR 68 Fast Red A. Conc. lb.	6.85	–
AR 151 Sch Red 3B Conc. lb.	4.50	–
AV 17 5BNS Conc. lb.	9.75	–
AV 49 4BNS Conc. lb.	12.22	–
AY 17 Fast Light Yell 2G. lb.	5.69	–
AY 23 Tartrazine Ex Conc. lb.	6.18	–
BBl 9 Zinc Free lb.	16.40	–
BBr 4 Bismark Brown R Ex. Conc. lb.	4.42	–
BG 1 Jade Crystals lb.	9.55	–
BG 4 Malachite Green Crystal. lb.	6.90	–
BV 1 Methyl Violet Crystals lb.	6.80	–
BV 10 Rhodamine B Ex. lb.	10.95	–
BY 2 Bond Yell SFA 150% lb.	10.10	–
DBl 1 Sky Blue 6B Conc. lb.	4.62	–
Ex. Conc. 300% lb.	9.25	–
DBl 8 Azurine G Conc. lb.	9.45	–
DBk 22 Fast Black GR lb.	2.85	–
Fast Black GR 150% lb.	4.28	–
DBr 230 Resin Fast Brown BRNB 200% lb.	7.23	–
DGr 28 Resin Fast Green GL lb.	9.15	–
DR 2 4B Ex. Conc. lb.	7.98	–
DR 31 Brilliant Red 12B Conc. lb.	6.16	–
DR 80 Fast Red 8BLN lb.	6.15	–
DR 81 Paper Red 8BLP lb.	6.85	–
DR 251 Fast Scarlet AV lb.	6.25	–
DOr 102 Fast Orange WSP Liq. lb.	2.47	–
H.S. Conc. 150% lb.	11.25	–
DY 4 Brilliant Paper Yell 3GX 125% lb.	4.69	–
Brilliant Paper Yell 3GX Liq. lb.	1.75	–
DY 11 Stilbene Yellow GA. Ex. Conc lb.	3.03	–
DY 41 Fast Yellow RGL Conc. 200% lb.	9.75	–
DY 27 Resin Fast Yellow L5G lb.	14.40	–
DsR 1 Scarlet BA lb.	4.26	–
DsR 91 Pink REL 200% lb.	21.00	–
DsY 3 Yellow G lb.	3.65	–
DsY 54 Yellow 3G lb.	6.84	–
DsOr 3 Orange GRA lb.	4.91	–
DsOr 37 Orange OB lb.	3.77	–
DsV 1 4RN Paste lb.	7.85	–
DsV 26 Bordeaux BV 200% lb.	17.25	–
DsB 127 Blue BGLF lb.	10.05	–
DsBl 102 Blue GFDA 300% lb.	22.80	–
50% Paste lb.	4.10	–
VG 1 Jade Green Double Paste lb.	5.50	–
VBk 25 Olive TA Paste lb.	5.65	–

E

Endrin, tech., 95-99%, dms., t.l. lb.	7.00	–
Ephedrine, syn. anhyd., USP, 80-oz. lots oz.	1.25	–
Ephedrine hydrochloride, NF, cryst., less than 1,000 kg. kilo	38.25	40.25
Ephedrine sulfate, USP cryst., dms., less than 1,000 kilos kilo	43.00	45.25
Epichlorohydrin, tanks, divd. lb.	.86	–
Epinephrine base, syn., USP, bots., 100 gram lots gram	.60	–
Epoxy rosin, liquid, bulk tanks, divd. lb.	1.31	1.41
Solid, bgs., t.l. lb.	1.28½	1.33½
Epsom salt (see Magnesium sulfate).		
Erythorbic acid, powd., gran., 100 lb. dms., t.l. or mixed t.l. f.o.b. works lb.	4.10	4.25
Ester gum, gum-rosin type, dms., c.l., divd., Ill., Md., Ky., E. States, Minneapolis, N.C., Ohio, St. Louis, St Paul, Va., W. Va. lb.	.75	–
Ester gum, wood-rosin type, dms., c.l., same basis lb.	.43	.46
Ethyl acetate, syn., 85-88%, tanks, divd. lb.	.41	.41½
99%, tanks, divd. lb.	.41½	.42½
Ethyl acetoacetate dms., c.l., divd. lb.	1.13	–
tanks, divd. lb.	1.05	–
Ethyl acrylate, tanks, frt alld. lb.	.66	–
Ethyl alcohol, syn, 190 pf., USP tax free, tanks, divd. E. gal.	1.55	–
Ethyl alcohol, absolute, 200 pf., tax free prices 12c. higher than 190 pf., tax free.		
Ethyl alcohol, formentation, tanks, f.o.b. works gal.	1.06	1.28
Price range attributable to various state tax incentives.		
Ethyl alcohol, denat. (see Denatured alcohol, ethyl).		
Ethyl p-aminobenzoate, NF (see Benzocaine).		
Ethyl benzoate, dms. lb.	1.35	1.50
Ethyl bromide, tech., 98%, dms., c.l., frt. alld. E. lb.	.76	–
Ethyl butyrate, dms. lb.	1.35	1.50
Ethyl cellulose, standard vis., 7 cps. bgs., t.l., frt. equald. E. lb.	4.55	–
standard vis., 10, 20, 45, 100 cps., t.l., frt. equald. E. lb.	4.17	4.22
medium vis., 50, 70, 100 cps., t.l., frt. equald. E. lb.	4.25	–
USP vis., 7 cps bgs., t.l., frt. equald. E lb.	4.88	–
USP 10,20,45,100 bgs., t.l., frt. equald. E lb.	4.59	4.69
VSP (medium) 50,70,100 bgs., t.l., Frt. equald. E. lb.	4.51	–
Ethyl chloride, tech., cyls., frt. alld. lb.	.26	.28½
tanks, frt. alld. lb.	.24	.26½
Ethyl cinnamate, dms. kilo	41.00	–
Ethyl ethanolamines, mixed dms., t.l., divd. E. lb.	1.23	–
tanks, divd. E lb.	1.15	–
Ethyl ether, refined, tanks, f.o.b. lb.	.46	–
Ethyl hexanoate, dms. lb.	4.25	4.75
2-Ethylhexoic acid, dms., c.l., t.l., divd. E. lb	.63	–
tanks divd. E lb.	.57	–
2-Ethylhexyl acrylate, straight or mixed, tanks, frt. alld. E. lb.	.79.5	–
2-Ethylhexyl alcohol, tanks, divd. lb.	.35	–
Ethyl iodide, cbys., works lb.	6.25	–
Ethyl linalool, syn 55-gal. dms. lb.	10.60	–
Ethyl linalyl acetate, syn., 55-gal. dms. lb.	10.85	–
Ethyl methacrylate, tanks, frt. equald. lb.	1.06	–
n-Ethyl morpholine, dms., t.l., frt. alld. lb.	2.00-	
tanks, same basis lb.	1.92	–
n-Ethyl-a-naphthylamine, dms., works lb.	1.04	–
Ethyl oxalate (see Diethyl oxalate).		
Ethyl parathion (see Parathion, ethyl).		
Ethyl silicate dist. (see Tetraethyl orthosilicate).		
Ethyl silicate, 40% available SiO_2, dms., t.l., f.o.b. works lb.	1.45	1.46
tanks, f.o.b. works. lb.	1.39	–
N-Ethyl-m-toluidine, tech., liq., dms., c.l., f.o.b. lb.	3.18	–
tanks, same basis lb.	3.10	–
N-Ethyl-o-toluidine, dms. lb.	2.85	2.90
Ethyl vanillin 100 lb. dms., 500 lbs. or more lb.	13.50	–
25 lb. dms., 500 lbs. or more lb.	13.75	–
100 lb. dms., less than 500 lbs. lb.	14.00	14.50
Ethylamine (see Mono-Di- and Tri-)		
N-Ethylaniline, dms., c.l., t.l., f.o.b. works lb.	1.66	–
tanks, same basis lb.	1.58	–
Ethylbenzene, bulk, f.o.b. Houston, Tex. lb.	.22	.23
Ethylene, contract, divd. lb.	.18	.18½
Ethylene brassylate, dms. lb.	18.00	18.25
Ethylenediamine, 99%, tanks, f.o.b. works lb.	1.30	1.305
Ethylenediamine dihydriodide lb.	7.55	9.25
Ethylenediamine tetraacetic acid, tetrasodium salt, soln., t.c., t.t., frt. equald. lb.	.36½	–
Ethylene dibromide dms., c.l., frt., equald. lb.	.38	.46
tanks, frt. equald. lb.	.32	.42
Ethylene dichloride, tanks, f.o.b. works lb.	.17	.17¼
Ethylene glycol, indust., tanks, frt. alld. lb.	.31	–
Ethylene glycol, monobutyl ether, tanks, divd. E. lb.	.41½	–
Ethylene glycol monoethyl ether, tanks, divd. E. lb.	.51	–
Ethylene glycol monomethyl ether, tanks, divd. E lb.	.34	–
Ethylene glycol monobutyl ether acetate, tanks, frt. alld. E. lb.	.64½	–
Ethylene glycol monoethyl ether acetate, tanks, ft. alld., E. lb.	.55½	–
Ethylene glycol monomethyl ether acetate, tanks, frt. alld. E. lb.	.43	–
Ethylene oxide, tanks f.o.b. lb.	.35	.46
Ethylene trichloride (see Trichloroethylene).		
Eucalyptol, NF, dms. Portuguese kilo.	7.50	–
Eucalyptus Citriadora Oil, Chinese kilo	3.05	–
Eugenol, USP, dms. kilo	7.55	–

F

Fennel oil, sweet, USP, cns. lb.	9.00	–
Fennel seed, Egypt lb.	.59	.68
Indian lb.	.87	.95
Fenugreek seed, Indian, bgs. lb.	.25	.32
Ferric chloride anhyd., tech., 350-lb. dms., c.l., works 100 lbs.	38.00	–
Ferric chloride, 42 Be. photo grade, dms., c.l., works 100 lbs.	9.10	
Ferric chloride, sewage grade, 100 percent basis, f.o.b. works, tank works ton	176.00	255.00
Ferric nitrate, cryst., dms., t.l., f.o.b. lb.	.64	–
Ferric oxalate, tech., gran., 50-lb. dm., f.o.b. works lb.	1.65	–
Ferric oxides (see Iron Oxides).		
Ferric phosphate, FCCg insoluble powder, dms. 10,000 lbs. lb.	1.10	1.15
Ferric pyrophosphate, soluble, purif., pearls, 50-lb. dm. lb.	1.11	–
Ferric resinate, precip., 6.75% Fe. dms., ton lots frt. alld. lb.	.45	–
Ferric sulfate, partly hydrated, 100-lb. bgs., c.l., works ton	141.00	–
bulk, works ton	117.00	–
Ferric ammonium citrate, NF, brown, green gran. 100 lb. dms., 2,000 lb. min., f.o.b. shipping pt. lb.	2.00	2.85
2c. per pound surcharge for shipments W. of Denver		
Ferric-ammonium oxalate, fine gran., 250-lb. dms., t.l., f.o.b. works. E. lb.	.42	–
Ferric hydroxyethylene diaminetriacetic acid, industrial grade, sodium salt, soln., 4.5% Fe, t.c., t.t., f.o.b. works lb.	.55	–
agricultural grade, sodium salt solution, 5% Fe, t.c., t.t., f.o.b. works lb.	.64	–
Ferrous fluoborate liq. conc., dms., t.l., works, frt. equald. lb.	.64	–
Ferrous gluconate, NF, t.l., works E. lb.	2.25	–
Ferrous naphthenate, liq., 6%, Fe. dms., divd. lb.	1.17	–
Ferrous sulfate, moist, bulk, t.l. f.o.b. works ton	30.00	–
heptahydrate, gran., bulk, t.l., f.o.b. works ton	145.00	150.00
monohydrate, gran., bulk., t.l., f.o.b. works ton	170.00	180.00
USP, powd., 400-lb. dms. lb.	.49	–
cryst., 250-lb. dms. lb.	.61	–
Fir oil, Canada dms. lb.	10.00	–
Siberia, dms. lb.	12.75	–
Fish oil, refd., alkali, tanks, c.l. lb.	.29	–
kettle-bodied, tanks lb.	.32	.36
light, cold-pressed, dms., c.l. lb.	.34	–
tanks lb.	.26	–
Fishmeal, dom., menhaden, 60% protein grd., bulk, f.o.b. Atlantic port ton	295.00	–
f.o.b. Gulf port ton	290.00	–
imp., Chilean, 65% protein min., bulk, c.l., t.l., ex whse., f.o.b Atlantic and Gulf ports ton.	285.00	–
Fluoboric acid, dms., t.l., works, frt. equald. lb.	.70	–
Fluorocarbon, No. 11 bulk, tanks, delvd. lb.	.57	.64
No. 12, bulk, same basis lb.	.68	.74
No. 22, bulk, same basis lb.	1.05	1.14
No. 113, bulk, same basis lb.	.89	.93½
No. 114, bulk, same basis lb.	1.02	1.08
Fluosilicic acid (see Hydrofluosilicic acid).		
Formaldehyde, 37% methanol free (uninhibited) divd., gulf lb.	.088	.0905
44-46% (1% methanol) tanks, divd. lb.	.1015	.1065
37% (inhibited 7% methanol, divd. lb.	.0945	.1025
37% (inhibited 11-15% methanol) tanks, divd. lb.	.1055	.1060
Formamide, tanks, f.o.b. lb.	.39	–
dms., same basis lb.	.44	–
Formic acid 90% tanks, f.o.b. works lb.	.36½	–
95% dms., c.l., works lb.	.51½	–
Fructose, cryst., 18,000 kilos or more, dms. lb.	.90	1.03
Fumaric acid, food grade, bgs. t.l., frt. equald. E. lb.	.75½	.77½
tech. grade, bgs., t.l., f.o.b. frt. equald. lb.		.82½
Furfural, tanks, f.o.b. Cedar Rapids, Iowa, and Belle Glade, Fla. lb.	.75	–
Furfuryl alcohol, tanks, f.o.b. Memphis, Tenn. and Omaha, Neb. lb.	.72	–

G

G salt, dms., frt. alld. 100% basis lb.	2.30	–
Gallic acid, 400-kilo lots kilo	23.05	–
Garlic oil, dms., Egyptian kilo	100.00	110.00
Gelatin, edible, 100 AOAC test, dms., l.t.l., divd. lb.	1.50	1.75
125 AOAC test, dms., l.t.l. lb.	1.75	1.85
150 AOAC test, dms., l.t.l. lb.	1.85	1.95
175 AOAC test, dms., l.t.l. lb.	1.95	2.05
200 AOAC test, dms., l.t.l. lb.	2.05	2.15
225 AOAC test, dms., l.t.l. lb.	2.10	2.25
250 AOAC test, dms., l.t.l. lb.	2.20	2.35
275 AOAC test, dms., l.t.l. lb.	2.30	2.45
300 AOAC test, dms., l.t.l. lb.	2.50	2.85
Gentian violet (see Methyl rosaniline chloride).		
Geraniol, syn., 90-92%, dms. lb.	5.25	–
nat., 90-92%, dms. lb.	3.60	–
syn. 96-98%, dms. lb.	5.75	–
Geranium oil, Moroccan lb.	48.00	–
Bourbon lb.	55.00	–
Chinese lb.	23.00	–
Egypt lb.	22.75	–
Turkish (see Palmarosa oil).		
Geranyl acetate, dms. lb.	5.44	6.00
nat., dms. lb.	10.95	–
Geranyl formate, syn., dms. lb.	8.60	–
nat., dms. lb.	15.95	–
Gilsonite, g.p., bulk, c.l., f.o.b. Bonanza, Utah ton	180.00	–
selects, same basis ton	180.00	–
Ginger, Cochin, bgs. lb.	.63	.65
Chinese lb.	.56	.58
Ginger oil, Chinese kilo	35.00	44.00
Indian kilo	65.00	–
Ginger oleoresin, NF, bots. lb.	30.00	–
Glauber's salt (see Sodium sulfate).		
Gluconic acid tech. 50% dms., c.l., t.l., f.o.b. works lb.	.50	–
tanks, same basis lb.	.44	–

CHEMICAL PRICES

WEEK ENDING NOV 28, 1986

Glue, bone, extracted, green, jellygrams, bgs., c.l. lb.	–	–
85 jellygrams, bgs., c.l., f.o.b. lb.	.86	–
115 jellygrams, bgs., c.l., f.o.b. lb.	.78	–
135 jellygrams, bgs., c.l., f.o.b. lb.	.77	–
164 jellygrams, bgs., c.l., f.o.b. lb.	.79	–
192 jellygrams, bgs., c.l., f.o.b. lb.	.87	–
220 jellygrams, bgs. c.l. f.o.b. lb.	.93	–
Glue, hide,		
108 jellygrams, bgs., t.l., f.o.b. lb.	.80	–
135 jellygrams, bgs., t.l., f.o.b. lb.	.85	–
164 jellygrams, bgs., t.l., f.o.b. lb.	.90	–
192 jellygrams, bgs., t.l., f.o.b. lb.	.95	–
222 jellygrams, bgs., t.l., f.o.b. lb.	1.00	–
251 jellygrams, bgs., t.l., f.o.b. lb.	1.05	–
283 jellygrams, bgs., t.l., f.o.b. lb.	1.10	–
315 jellygrams, bgs., t.l., f.o.b. lb.	1.15	–
347 jellygrams, bgs., t.l., f.o.b. lb.	1.20	–
379 jellygrams, bgs., t.l., f.o.b. lb.	1.25	–
411 jellygrams, bgs., t.l., f.o.b. lb.	1.30	–
444 jellygrams, bgs., t.l., f.o.b. lb.	1.35	–
477 jellygrams, bgs., t.l., f.o.b. lb.	1.40	–
Glutamic acid, 99½% dms., 100-lb. lots, frt. alld. kilo	6.65	–
Glycerine, nat., refd., USP, CP 99½% tanks, divd. lb.	.89½	–
USP, CP, nat. 96%, tanks, divd. lb.	.87¾	–
Syn. 96%, tanks divd. lb.	.89¼	–
Syn. 99.5%, tanks divd. lb.	.91	–
Glycine (see Aminoacetic acid).		
Glyceryl guaiacolate. 100-lb. fib. dms. f.o.b. kilo	14.50	–
Glycolic acid (see Hydroxyacetic acid)		
Glyoxal 40% soln., bulk, tanks, divd. lb.	.44½	–
Grapefruit oil, Fla., dms. lb.	3.00	–
Calif., dms lb.	3.00	–
Israeli lb.	3.00	–
Graphite, amorph, powd., bgs., dms., ex whse lb.	.16	.40
cryst., 88-90%, powd., bgs., dms., ex whse. lb.	.30	.60
Graphite, cryst., 90-92%, powd., bgs., dms., ex whse lb	.40	.75
95-96% powd., bgs., dms., ex whse lb	.60	.90
Graphite, amorph., cryst., 97% and up, powd., bgs., dms., ex whse lb.	.80	1.20
Graphite, flake, No. 1, 90-95%, bgs., dms., ex whse lb.	.65	.75
No. 2, 90-95%, bgs., dms., ex whse lb	.65	.75
Grease (See Oils, Fats & Waxes market report)		
Grease oil (See Lard oil).		
Guaiacol, tech., 500-lb dms., 24,000 lb. min., f.o.b. Wallingford, Conn. lb.	2.70	–
Guaiacwood oil, dms. lb.	3.75	–
Guar gum, edible, bgs., c.l., f.o.b. ship't. pt. lb.	.50	.75
Indust., bgs., high viscosity, c.l., same basis lb.	.50	.85

H

Heliotropin, dms. lb.	8.00	8.25
Hemlock oil (see Spruce oil).		
Henbane leaves, bls. lb.	.55	–
Heptane, indust., tanks, f.o.b. Beaumont, Tex. gal.	1.07	–
95%, tanks, f.o.b. Houston, Tex. gal.	1.18	–
Heptanoic acid, syn., tanks, f.o.b.	.65	–
1-Hexadecanol, syn., tanks, f.o.b. lb.	.43½	–
Hexahydrophthalic anhydride, tech. dms., l.t.l., f.o.b. works lb.	1.42	–
Hexamethylenetetramine, gran. bgs., c.l., t.l., works lb.	.55	–
gran. dms., c.l., t.l., works lb.	.59	–
pdr. bgs., c.l., t.l., works lb.	.60	–
powd. dms, c.l., t.l., works lb.	.63	–
Hexane, indust., tanks, works gal.	1.01	1.15
95%, tanks, f.o.b. Houston, Tex. gal.	1.12	–
1-Hexanol, syn., tanks, f.o.b. lb.	.50	–
Hexyl alcohol, mixed isomers, tanks lb.	.32	–
p-Hexyl methacrylate, dms., c.l., works lb.	.76½	–
Hexylene glycol, tanks, divd. lb.	.50	–
Hexylresorcinol, USP, dms., 25-lb. lots or more, frt. alld. lb.	30.00	–
Homatropine hydrobromide, USP, 10-100-oz. lots, bots. oz.	10.25	11.30
Homatropine methylbromide, USP, 10-250 oz. lots, bots. oz.	9.70	10.70
Horehound herb, bls. lb.	.25	.28
Hydrazine hydrate, 85%, t.t., frt. alld. lb.	1.54	–
55-gal. dms., t.l., frt. alld. lb.	1.61	–
Hydriodic acid, purif., 47%-57%, 2-cbys., f.o.b. works lb.	7.50	–
Hydroabietyl alcohol, tech., solid. dms., c.l., f.o.b. zone 1 lb.	.88	–
tanks, f.o.b. zone 1 lb.	.80	–
Hydrobromic acid, 48% dms., c.l., t.l., f.o.b. lb.	.36½	–
Hydrochloric acid, anhyd. (see Hydrogen chloride).		

CHEMICAL PRICES

WEEK ENDING NOV 28, 1986

Hydrochloric acid, 20° Be, tanks, works, East .... ton	55.00	65.00
Midwest .... ton	60.00	70.00
Gulf Coast .... ton	57.00	–
West Coast .... ton	90.00	105.00
22° acid, same basis, East ..... ton	68.00	78.00
Midwest .... ton	66.00	70.00
Gulf Coast .... ton	63.50	–
West Coast .... ton	100.00	115.00
NOTE: Prices vary and are either freight collect freight equalized depending on producer and location.		
Hydrocortisone acetate, micronized, dms., 25 kilos or more . gram.	.70	–
Hydrocortisone, alcohol, micronized, dms., 25 kilos or more . gram.	.70	–
Hydrofluoric acid, anhyd. (see Hydrogen fluoride)		
Hydrofluoric acid, aqueous. 70% tanks., f.o.b. frt. equald .... 100lbs.	43.00	–
Hydrofluosilicic acid, 15-gal. dms., t.l., works, 30% basis .... ton	–	–
tanks, 100% basis, works .... ton	190.00	210.00
Hydrogen bromide, anhyd. cyls., extra, 30,000-lbs., f.o.b. works. . lb.	7.00	–
Hydrogen chloride, anhyd., 50-lb. cyls., c.l., works .... lb.	.65	–
600-lb. cyls., c.l., same basis. . lb.	.62	–
Hydrogen chloride, anhyd., tube trailers, seller's trailer, min. 100,000 lbs. a year ..... lb.	.37	–
tube trailers, buyer's trailer ..... lb.	.27	–
Hydrogen chloride anhyd., tanks, works .... ton	270.00	–
Hydrogen cyanide, liq., 99.5%, tanks, works .... lb.	.50	–
Hydrogen fluoride, anhyd., tank cars c.l., f.o.b., frt. equald ..... lb.	.6675	–
Hydrogen peroxide, 35% tech., tanks, works, ft. equald .... lb.	.2325	–
50% tankcars, frt. equald ..... lb.	.3225	–
70%, tankcars frt. equald ..... lb.	.45	–
Hydrogen sulfide, liq., 99.25% min. seller's tanks, works ..... lb.	.12	.13
170 lb. cylinders .... lb.	2.27	–
Hydroquinone, photo grade, consumers. c.l., t.l., divd .... lb.	2.54	–
tech, dms. c.l., divd .... lb.	1.95	–
Hydroxyacetic acid, tech., 70%, tanks, Belle, W. Va. .... lb.	.49½	–
Hydroxylammonium sulfate, dms., t.l., f.o.b. .... lb.	.83	–
p-Hydroxybenzene sulfonic acid (see p-Phenolsulfonic acid).		
Hydroxybutyl methylcellulose (visc. 12,000 cps.) 50 lb. bags, t.l., cl. 30,000 lb. min., divd., zone 1 .... lb.	2.10	–
Hydroxycitronellal dimethyl acetal. dms .... lb.	16.55	–
p-Hydroxydiphenylamine, dms., t.l., f.o.b. works .... lb.	4.10	–
Hydroxycitronellal,		
natural, dms .... lb.	9.40	–
pure, dms .... lb.	13.60	–
extra grade, dms .... lb.	14.80	–
syn., dms .... lb.	9.50	–
Hydroxyethyl cellulose, t.l., divd.... lb.	2.07	2.12
Hydroxyethyl methylcellulose (visc. 5,000 through 45,000 cps.) 50 lb. bags, t.l., c.l., 30,000 lb. min., divd., zone 1 .... lb.	2.73	–
Hydroxypropyl methylcellulose, premium, U.S.P. (visc. 4,000 through 15,000) 50 lb. bags, t.l., c.l., 30,000 lb. min., divd., zone 1 .... lb.	2.87	–
Hydroxypropyl methylcellulose, U.S.P (visc. 50 through 100 cps) 50 lb. bags, t.l., c.l., 30,000 lb. min., divd., zone 1 .... lb.	2.99	–
Hydroxypropyl methylcellulose (visc. 4,000 through 15,000 cps) 50 lb. bags, t.l., c.l., 30,000 lb. in., divd., zone 1 .... lb.	2.17	–
Hydroxypropyl methylcellulose (visc. 50 through 100 cps) 50 lb. bags, t.l., c.l., 30,000 lb. min., divd., zone 1 .... lb.	2.64	–
8-Hydroxyquinoline (see Oxyquinoline)		
Hypophosphorous acid, purif., 50% dms., c.l., works .... lb.	3.15	–

I

Ichthammol. NF. 200-kilo dms ..... lb.	4.25	4.50
Iminodiacetic acid, 96% min., dms., c.l., t.l., works .... lb.	3.00	–
Indole, dms .... lb.	25.50	–
Inositol. 50-kilo dms., 1000 kilos or more, f.o.b. works ..... kilo	17.50	22.00
Iodine, crude, dms .... kilo	13.50	18.00
Iodine USP .... lb.	14.21	14.59
Iodochlorhydroxyquin, USP, XVI 50-kilo dms., 100-499 kilos, frt. alld .... kilo.	35.00	45.00
Iodoform, NF, dms., 300-lbs., f.o.b. works .... lb.	24.00	–
a-Ionone, dms .... lb.	18.20	–
b-Ionone, dms .... lb.	13.10	–
Ipecac root, whole, bgs .... lb.	25.00	–
Irish moss, bleached, prime, whole .... lbs.	.55	.60
Iron blue, alkali-resistant, bgs., l.c.l., ton lots, div. E .... lb.	2.70	–
Iron blue, reg., bgs., l.c.l., ton lots, same basis .... lb.	2.00	2.18
Iron, purif., powd., pails, 10-100-lb. lots .... lb.	1.00	–
Iron oxide, black, syn., bgs., c.l., frt. equald .... lb.	.68½	.75½
Iron oxide, brown, syn., bgs., c.l., frt. equald .... lb.	.68	.78½
Iron oxide, metallic brown, l.c.l., bgs., frt. equald .... lb.	.13	.15
Iron oxide, nat., red., dom., pure, bgs., c.l., works .... lb.	.275	.40
Iron oxide, yellow, ... lb.	.18	–
syn., bgs., c.l., frt. equald. . lb.	.63	.71
Iron oxide, buff, nat., dom, bgs., c.l., t.l., works, light .... lb.	.75	.80
dark .... lb.	.60	–
other shades, bgs., c.l., frt. equald .... lb.	.50	.55
Isatoic anhydride, bgs., f.o.b. works lb.	1.40	–
Isoamyl alcohol, 95% tanks, frt. alld .... lb.	1.44	1.48
Isoborneol, 100 lb. dms .... lb.	7.25	–
Isobornyl acetate, dms .... lb.	.80	1.15
Isobutyl acetate, solvent grade, tanks, frt. alld .... lb.	.45	.48
Isobutyl acrylate, tanks, frt. alld. E. . lb.	.71	–
Isobutyl alcohol, tanks, divd .... lb.	.29	–
Isobutylene, 99%, tanks, f.o.b. works .... lb.	.32	–
Isobutyl isobutyrate, tanks, f.o.b. works .... lb.	.42½	–
Isobutyl methacrylate, tanks, divd. . lb.	.87	–
Isobutyl phenylacetate, dms ..... lb.	3.10	3.50
Isobutyl salicylate, dms .... lb.	3.45	–
Isobutyraldehyde, tech., dms., c.l., divd .... lb.	.43	–
tanks, divd .... lb.	.35	–
Isobutyric acid, dms., c.l., t.l., divd. . lb.	No Prices	
tanks, same basis .... lb.	.75	
Isobutyronitrile, dms., c.l., f.o.b. works frt. collect .... lb.	.84	–
tanks, same basis .... lb.	.75	–
Isoeugenol, dms .... lb.	5.20	5.60
Isoniazid, powd .... kilo	12.00	–
Isonicotinic acid, hydrazine (see Isoniazid).		
Isononyl alcohol, dms., t.l. .... lb.	.48	–
Iso-octyl alcohol, tanks, divd ..... lb.	.44	–
Isophorone, tanks divd .... lb.	.81	–
Isophthalic acid, 99%, bulk, f.o.b., Joliet, Ill., min. frt. alld ..... lb.	.46	–
Isophthalonitrile, bgs., t.l., works... lb.	2.65	–
Isopropyl acetate, tanks, divd ..... lb.	.47	–
Isopropyl alcohol, anhyd., 99%, tanks, divd .... gal.	1.38	–
refd., 95%, tanks, divd .... gal.	1.31	–
refd., 91%, tanks, divd .... gal.	1.25	–
Isopropyl ether, tanks, divd .... lb.	.44	–
crude, tanks, divd .... lb.	.37	–
Isopropylamine. (see Mono-, Di- or Tri-).		
Isopropyl myristate, dms., t.l., E.... lb.	1.19	1.50
Itaconic acid, refd. bgs t.l. .... lb.	1.45	1.48

J

J acid, paste, dms., works, 100% basis .... kilo	4.75	–
Japan wax, cs. .... lb.	5.50	5.60
Jojoba oil, 55-gal. dms., f.o.b. Arizona producing point .... gal.	30.00	40.00
Juniperberry oil, Italian .... kilo	120.00	–

K

Kaolin, water washed, fully calcined, bags c.l., f.o.b. Georgia .. ton	255.00	–
NF pwd., colloidal, bacteria controlled, 50 lb. bags., 5,000 lb. lots .... lb.	.24	–
Kaolin, uncalcined. No. 1 coating, bulk, c.l., f.o.b., Georgia ..... ton	94.00	–
No. 2 coating .... ton	75.00	–
No. 3 coating .... ton	73.00	–
No. 4 coating .... ton	70.00	–
filler, gen,l purpose, same basis .... ton	58.00	–
delaminated water washed, uncalcined paint grade 1 micron avg., same basis .... ton	182.00	–
dry-grd. airfloated soft, same basis .... ton	60.00	–
Karaya gum, No. 1, powd., bbls.... lb.	2.25	–
No. 2, powd., bbls .... lb.	1.95	–
Kola nuts, bgs .... lb.	.52	.57

L

Lacquer diluent petroleum, 140F.-200F, b.r., t.c., New Jersey and New York .... gal.	1.25	–
Houston, Texas .... gal.	1.29	–
Lacquer diluent, petroleum 200F.-240F, b.r., tankcars, New York and New Jersey.... gal.	1.20	1.25
Houston, Tex. .... gal.	1.12	–
Lactic acid, food grade 88%, t.c., f.o.b. works .... lb.	1.06	–
50%, t.c., frt. equald .... lb.	.62	–
tech., 88%, t.c., frt. equald.... lb.	1.03	–
Lactose, edible, reg. bgs., c.l., works .... lb.	.22	.28
Lactose, USP, reg. dms., c.l., t.l., frt. equald .... lb.	.55	.69
Lactose, USP, spray dried, bgs, t.l., frt. equald .... lb.	.60	–
Lake C, red toner. (red 53) bbls., frt. alld .... lb.	5.70	–
Lanolin, anhyd., cosmetic. 400-lb. dms., works .... lb.	1.18	1.25
pharmaceutical, 400-lb. dms. works .... lb.	1.15	–
tech., (under 2% f.f.a.), 400-lb. dms., works .... lb.	1.08	113
Lard (See Oils, Fats & Waxes market report.)		
Lard oil, No. 1, dms., c.l., f.o.b. .... lb.	.34	
tanks, same basis .... lb.	.28	
Lard oil, extra, winter-strained, dms., c.l. .... lb.	.41	–
tanks, same basis .... lb.	.33	–
prime, burning, dms., c.l., same basis, Chicago .... lb.	.43	–
prime, burning, tanks, same basis .... lb.	.35	–
NOTE: 300 Mi. rad. 1¼c. higher, except Texas, 2c., and West Coast, 3c. higher.		
Laurel leaves, Turkish .... lb.	3.00	3.25
Laurent's acid, drums, f.o.b. ...... lb.	3.85	–
Lauric acid, coml., pure bgs., c.l.... lb.	.65	.71
Lauric aldehyde (aldehyde C-12). dms .... lb.	7.75	–
n-Lauryl methacrylate, dms., c.l., t.l., works .... lb.	1.72	–
Lavandin oil, Abrialis, 30-32%, dms. lb.	6.50	–
Lavender flowers, ord. .... lb.	.65	.75
medium, bls. .... lb.	.80	.90
select. bls. .... lb.	1.10	1.19
Lavender flower oil, NF, French		
40-42%, ester, cns. .... lb.	9.00	13.00
spike, Spanish, dms. .... kilo	13.00	14.00
Lead acetate, purif., flake. 400-lb. dms., works .... lb.	.46	–
tech., flake, t.l., 400lb. dms., works .... lb.	.37	–
Lead blue, basic, sulfate, bbls., c.l., ship,t. pt., f.o.b. .... lb.	.87	–
Lead carbonate. (see Lead white basic carbonate).		
Lead chloride, 400-lb. dms., works. lb.	3.25	–
Lead dioxide, tech., powd., 200-lb. dms., t.l., works .... lb.	.66	.70
Lead fluoborate, liq. conc., dms., t.l., works, frt. equald .... lb.	.65	–
Lead metal, divd .... lb.	.28	–
Lead monosilicate, milled, bgs., c.l., f.o.b. works .... lb.	.36½	–
coarse, bgs., c.l., same basis.... lb.	.37½	–
Lead naphthenate liq., 24% Pb. dms., frt. alld .... lb.	1.11	–
Lead nitrate tech., cryst., 400-lb. dms., t.l., works .... lb.	.32½	–
Lead peroxide (see Lead dioxide).		
Lead red, 95% Pb_3O_4, or less, bgs. c.l., works .... lb.	.38	.38½
Lead red, 97% Pb_3O_4, bgs. c.l., works .... lb.	.38½	.39
Lead, red, 98% Pb_3O_4, bgs., c.l., same basis .... lb.	.39½	–
Lead silicate (see Lead, white, basic silicate).		
Lead silicochromate, bgs., c.l., works .... lb.	.35	–
Lead sulfate (see Lead, blue, basic sulfate and Lead, white, basic sulfate)		
Lead, white, basic carbonate, bgs., c.l., frt. alld .... lb.	1.30	1.40
Lead, white, basic, silicate, bgs., c.l., same basis .... lb.	.87	–
Lead, white, basic sulfate, bgs., c.l., same basis .... lb.	.85	–
Lecithin, edible, tech., bleached, non-ret. dms., l.c.l., works..... lb.	.36	–
unbleached non-ret. dms., l.c.l., same basis .... lb.	.34	–
edible, tech. bleached, non-ret., dms., t.l., works .... lb.	.28	–
unbleached, non-ret., dms., t.l., same basis .... lb.	.26	–
Lemon oil, Argentina .... kilo	16.00	–
Brazil .... lb.	9.00	–
Calif., USP, dms. .... lb.	8.50	9.50
Italian .... lb.	12.50	–
Lemongrass oil, Indian, dms ..... kilo	11.25	–
Guatemalan, dms .... lb.	2.25	–
dl-Leucine, dms., 1 kilo works. ... kilo	60.00	90.00
Licorice root, whole, bls .... lb.	.40	.50
gran., bls .... lb.	.70	.90
powd., bls .... lb.	.95	–
Lignosulfonate (see under Ammonium or Sodium lignin sulfonate).		
Lime, chemical, pebble (quicklime), bulk, 50,000 lbs., works, f.o.b. plants .... ton	39.00	45.00
Lime, chemical, hydrated, bulk, same basis .... ton	46.00	50.00
bgs., same basis .... ton	54.00	57.00
Lime, NF, purif., 100-lb. dms. ..... lb.	.69	–
Lime oil, dist., Mexican, dms. ..... lb.	5.60	–
Haitian, dist., dms .... lb.	6.50	–
expressed, dms. .... lb.	17.50	–
Lime salts (see Calcium).		
d-Limonene, dms .... kilo	.70	.85
Linalool ex bois de rose oil, dms.... lb.	6.35	–
syn., 98-100% dms., f.o.b. works.. lb.	2.93	–
Linalool oxide, syn., 55-gal. dm. ... lb.	7.75	–
Linalyl acetate ex bois de rose oil, 90-92%, dms .... lb.	18.00	21.00
syn. 98-100%, dms., f.o.b. works. lb.	3.10	–
Linalyl benzoate, syn., 55-gal. dms. lb.	8.00	–
Linalyl cinnamate, syn., 55-gal. dms .... lb.	59.65	–
Linalyl formate, syn., 55-gal. dms... lb.	7.75	8.50
Linalyl isobutyrate, syn., 55-gal. dms .... lb.	6.50	6.55
Lindane, 20% formulation, dms., divd .... gal	13.10	–
99.9% tech., dms., t.l., divd .... lb.	6.50	–
Linalyl propionate, syn., 55-gal. dms .... lb.	7.90	–
Linden flowers, with leaves, bls.... lb.	.78	.85
without leaves, bls. .... lb.	.90	1.15
Linseed meal (see Oils, Fats & Waxes market report).		
Linseed oil, (see Oils, Fats & Waxes market report)		
Linseed oil fatty acid, dist., dms.... lb.	.60	.67
tanks .... lb.	.53	.62
Litharge, com,l., powd., bgs., c.l., works .... lb.	.34½	.40
Lithium bromide, anhyd., dms., ton lots, divd .... lb.	6.27	–
soln., same basis .... lb.	4.00	4.12
Lithium carbonate, powd., bgs., c.l., t.l., divd .... lb.	1.50	–
Lithium chloride, anhyd., c.l., t.l., divd .... lb.	3.32	3.49
soln., dms., c.l., t.l., divd .... lb.	2.94	2.95
Lithium fluoride, dms., c.l., t.l., divd. lb.	4.90	5.12
Lithium hydride, c.l., t.l., divd. 10,000 or more .... lb.	23.50	–
Lithium hydroxide, monohydrate, dms., c.l., t.l., divd .... lb.	1.93	–
Lithium hypochlorite, c.l., t.l., works. lb.	1.07	–
Lithium metal, 1,000-lb. lots or more, divd .... lb.	22.70	–
Lithium nitrate, tech., dms., 100-lb. lots .... lb.	3.25	–
Lithium stearate, bgs., c.l., frt. alld. . lb.	1.01	–
Lithium sulfate, anhydrous, t.l. divd. lb.	3.09	–
Lithol red toner, barium, dms., frt. alld .... lb.	3.27	–
calcium, dms., same basis.... lb.	3.50	–
Lithol rubine toner (red 57), resinated, dms., frt. alld .... lb.	5.60	–
Litsea cubeba oil, dms .... lb.	2.50	–
Locust bean gum, powd., bgs. ..... lb.	6.00	6.75
2,4-Lutidine, dms., t.l., frt. equald. kilo	5.75	–
Lycopodium, 50-lb. dms .... lb.	8.00	10.00
1-Lysine monohydrochloride, feed grade, 10,000 lbs. divd.... lb.	1.35	1.40

M

Mace, East Indian, siftings .... lb.	5.40	–
Slauw #2 .... lb.	5.80	–
Magnesia, tech., light, neoprene-grade, bgs., c.l., t.l., works lb.	.76	.81
Magnesia, syn., tech., chemical-grade, bulk, c.l., t.l. works .... ton	330.00	–
bags, c.l., t.l., same basis.... ton	365.00	–
deadburned, bulk, same basis .... ton	392.00	–
bgs., same basis .... ton	409.00	–
Magnesia, nat., tech., heavy, 85%, 150 mesh, bulk, c.l., t.l., f.o.b. Nev .... ton	232.00	–
90%, 325 mesh, same basis.. ton	265.00	–
Magnesium bromide, 80-lb. dms., hexahydrate .... lb.	2.50	–
Magnesium carbonate, light, tech., bgs., c.l., t.l., works, frt. equald .... lb.	.73	.78
USP, lite bgs., c.l., same basis. . . lb.	.74	.80
USP, heavy, bgs., c.l., same basis. . lb.	.83	–
Magnesium chloride, anhyd., 92%, flake or pebble dms., c.l., works .... lb.	.12¾	.15
Magnesium chloride, hydrous, 99%, flake, bgs., c.l., works.... lb.	.14½	–
Magnesium gluconate, 100-lb. dms. f.o.b. works, E. .... lb.	4.25	–
Magnesium hydroxide, NF, powd., dms., c.l., t.l., works frt. equald .... lb.	.76	–
Magnesium lauryl sulfate, tanks, f.o.b. works .... lb.	.22	.26½
Magnesium metal, 99.8%, ingots, 10,000-lb. lots or more. f.o.b. Freeport, Tex. .... lb.	1.53	–
die casting alloys .... lb.	1.29	1.33
Magnesium nitrate, tech, flake. 250-lb. dms., t.l., works .... lb.	.32	–
Magnesium oxide, USP, light, bgs., c.l., works, frt. equald .... lb.	1.65	–
heavy, dms., c.l., same basis.... lb.	1.54	–
Magnesium oxide, tech. (see Magnesia).		
Magnesium phosphate, tribasic, tech. 60-lb. bgs., f.o.b. .... lb.	1.00	–
Magnesium silicate (see Talc).		
Magnesium silicofluoride, bgs., c.l., t.l. works .... lb.	.1645	.1800
Magnesium stearate, bulk, t.l. ..... lb.	.95	1.05
Magnesium sulfate 10% Mg. (epsom salts), tech. bgs., t.l., works .... lb.	.14	–
bulk, same basis .... lb.	.13	–
USP, cryst., bgs., same basis . lb.	.13½	–
USP, cryst., bulk, same basis . lb.	.14½	–
Magnesium sulfate, 17% Mg. (synthetic monohydrate), tech. bgs. t.l., works .... lbs.	.80	–
CP, same basis .... lbs.	1.25	–
Magnesium sulfate, anhydrous, CP bgs., t.l., works .... lbs.	1.75	–
Magnesium sulfate trihydrate, tech., bgs., t.l., works .... lb.	.45	–
Magnesium trisilicate, USP, powd., fib. dms. 5,000-lb. lots .... lb.	.38	–
USP, micronized powd., dms., 375-lb. lots .... lb.	.83	–
Malathion, tech., dms., t.l., works. . lb.	1.62	–
Maleic acid, cryst., powd., drums, 100 kilos, f.o.b. .... kilos	3.20	–
drums, tons, f.o.b. .... kilos	2.80	–
Maleic anhydride, bgs., t.l., works, frt. equald .... lb.	.55	.58
tanks, works, frt. equald .... lb.	.53	–
Malic acid, purif, and food grades. 50-lb. bgs., t.l., c.l., divd. .... lb.	.81	.84
Mandarin oil, Brazilian, dms .... lb.	17.75	–
Mandelic acid, dms., 1,000 kilo lots .... kilo	8.00	10.00
Manganese acetate, dihydrate, dms., divd .... lb.	.43½	.49
	.46	–
tetrahydrate, dms., t.l., divd ..... lb.	1.88	1.90
Manganese borate printing ink drier. lb.	.80	.99
Manganese borate, tech., dms.... lb.		
Manganese carbonate, chemical grade, 46% Mn. bgs., 20,000-lb. lots or more, works. ... lb.	1.05	–
Manganese chloride, anhyd., dms., 20,000-lb. lots or more.... lb.	.61	–
Manganese dioxide, nat., African, grd., 74%-76% MnO_2, 100-lb. bgs., .l., works .... ton	200.00	–
84% MnO_2, same basis ..... ton	250.00	300.00
Manganese dioxide, syn., cryst., battery grade, 90%-92% MnO_2, 100-lb. bgs., c.l., works. . lb.	.70	.97½
chemical, ferrite grade, same basis .... lb.	.49	.61
Manganese gluconate, FCC grade, 100-lb dms., f.o.b. works. . lb.	3.50	.96
Manganese hydrate dms., divd.... lb.	.88	
Manganese hypophosphite, NF, dms. .... lb.	8.75	
Manganese metal, electrolytic, No. 1 chip, bulk, c.l., works ..... lb.	.83½	
dms., c.l., works .... lb.	.84½	
Manganese naphthenate, liq., 6% Mn. dms., divd .... lb.	.87½	
Manganese resinate, fused, 3½% Mn. dms., frt. alld .... lb.	.34¼	–
precip. 6½-7% Mn. dms .... lb.	.42	–
Manganese sulfate, fertilizer grade, run-of-pile, 75%-78% $MnSO_4$, 25 kilo bgs., 50-ton cars, divd. E. of Miss. .... ton	280.00	–
bulk, hopper cars, same basis .. ton	245.00	–
Manganese sulfate, 28% Mn, gran., bgs., c.l., t.l., works ..... ton	330.00	–
Manganese sulfate, liq., 6% Mn, dms., frt. alld .... lb.	.60	–
Mannitol, coml., powd., dms., t.l., works .... lb.	3.02	–
Marjoram, French .... lb.	.86	.89
Egyptian .... lb.	.61	.82
MBT (see 2-Mercaptobenzothiazole).		
MBTS (see Mercaptobenzothiazyl disulfide).		
MDI (see Diphenylmethane 4,4,-di-isocyanate)		
Melamine, bgs., c.l., t.l., 40,000-lb. min., f.o.b. works .... lb.	.51½	.59½
bulk, c.l., t.l., same basis .... lb.	.50	.58
Melamine-formaldehyde resin, g.p., t.l. frt. alld .... lb.	.55	.60
molding compounds, same basis .... lb.	.46½	–
Menhaden oil, crude, tanks, works Atlantic Coast .... lb.	.12	–
Gulf ports, same basis .... lb.	.13	–
Menthol, nat., USP, Brazilian large and regular crystals, spot, cs., bulk .... lb.	6.50	6.75
syn., USP, racemic, 100-450 lbs. lb.	9.00	–
2-Mercaptobenzothiazole, bgs., t.l., works, frt. alld .... lb.	1.26	1.55
Mercaptobenzothiazyl disulfide t.l., dms., works, frt. alld .... lb.	1.33	1.68
Mercuric chloride NF, gran., powd., 100-lb. dms., f.o.b. works.. lb.	6.50	–
Mercuric oxide, red, purif., 100-lb. dms., f.o.b. works .... lb.	7.00	7.25
tech., 100-lb. dms., same basis .... lb.	5.50	7.00
yellow, NF, 100-lb. dms., same basis .... lb.	7.00	7.25
tech., 100-lb. dms., same basis .... lb.	5.50	7.50
Mercurous chloride (see Calomel).		
Mercury, ammoniated (see White precipitate USP XV).		
Mesityl oxide, tanks, divd .... lb.	.46	–
Methacrylic acid, glacial, 99%, dms., t.l., frt. equald .... lb.	.87	–
tanks, works, frt. equald ...... lb.	.78	–
d-Methamphetamine hydrochloride, dms .... lb.	12.00	16.00
dl-Methamphetamine hydrochloride, dms .... lb.	4.50	7.00
Methanol, syn., barges, f.o.b. producing point, Gulf Coast .... gal.	.28	–
Methenamine (see Hexamethylenetetramine).		
Methionine hydroxyanalogue, dry, 86% activity t.l., frt. alld... lb.	.86	–
liquid, 88% activity, t.l. frt. alld .... lb.	.88	–
dl-Methionine (see Racemethionine)		
Methoxychlor, 50% wettable powder, dealers, dms .... lb.	2.05	–
Methyl abietate, non-ret. dms., c.l., divd. E .... lb.	9.40	–
Methyl abietate, hydrogenated, non-ret. dms., l.c.l., same basis .... lb.	10.00	–
Methyl acetoacetate, East, divd. bulk .... lb.	.85	–
Methyl acrylate, tanks, divd ...... lb.	66.00	–
Methyl alcohol (see Methanol)		
Methyl amyl alcohol, tanks, divd.... lb.	.55	–
Methyl n-amyl ketone, tks., divd.... lb.	.54½	–
Methyl anthranilate, tech., dms., t.o.b. .... lb.	1.41	2.85
Methyl benzoate, dms., t.l. .... lb.	.25	–
99.9%, perf. grade, dms., t.l. .... lb.	1.65	–
Methyl bromide, dist., tanks, 140,000 lbs. min., frt. alld .... lb.	.56¾	–
Methylcellulose, premium, USP (visc. 400 through 4,000 cps) 50 lb. bags, tl., cl., 30,000 lb., min., divd., zone 1 .... lb.	2.73	–
Methylcellulose, premium USP (visc. 15 cps) 50 lb. bags, tl., cl., 30,000 lbs., divd., zone 1. . lb.	2.85	–
Methylcellulose, (visc. 400 through 4,000 cps) 50 lb. bgs., tl., cl., 30,000 lbs., divd., zone 1. . lb.	2.24	–
Methylcellulose (visc. 15 to 25 cps) 50 lb. bags, tl., cl., 30,000 lb. min., divd., zone 1 .... lb.	2.52	–
Methyl chloride, indust. bulk, tanks, f.o.b. works .... lb.	.22	.26
Methyl chloroform (see 1,1,1-Trichloroethane).		
Methyl cinnamate, dms. .... lb.	4.65	–
Methyl p-cresol, dms. .... lb.	6.00	–
Methyl ethyl ketone, tanks, divd, E.. lb.	.235	–
Methyl eugenol, 25-lb. cns .... lb.	3.55	3.80
Methyl formate, pure, non-ret. dms., works .... lb.	.41	–
tanks, same basis .... lb.	.29	–
tech., tanks, works .... lb.	.31	–
Methyl heptenol, syn., 55-gal. dms. lb.	14.50	–
Methyl heptenone, pure, dms ..... lb.	7.30	–
Methyl heptin carbonate, dms ..... lb.	45.00	–
Methyl p-hydroxybenzoate (see Methylparaben)		
Methyl ionone, ald., dms. .... lb.	7.30	9.40
Methyl isoamyl ketone, tanks, divd. E .... lb.	.51	–
Methyl isobutyl carbinol (see Methyl amyl alcohol).		
Methyl isobutyl ketone, tanks, divd. lb.		
divd. zone 2 (Calif.) .... lb.	.35	–
divd. zone 3 (W. of Rockies, excluding Calif.) .... lb.	.38	–
	.41	–
Methyl isoeugenol, 25-lb. cns ..... lb.	6.60	10.40
Methyl methacrylate, tanks, divd... lb.	.62	–
Methyl naphthyl ketone, cryst., dms .... lb.	14.00	–
Methylparaben, USP, 500 kilograms, f.o.b. .... kilo	10.14	–
tech., 500 kilograms, f.o.b. .... kilo	9.70	–
Methyl parathion, tech., 80%, dms., frt. alld. E. .... lb.	1.65	–
Methyl phenylacetate, dms. ...... lb.	3.60	5.40
N-Methyl 2-pyrrolidone, tanks, f.o.b. plant .... lb.		
dms., c.l., t.l., same basis .... lb.	1.32	–
Methyl rosaniline chloride, USP, 1-lb. cans .... lb.	1.40	–
Methyl salicylate, NF, 1000-lb. dms., t.l., frt. alld .... lb.	5.50	–
Methyl violet (see Methyl rosaniline chloride).	1.79	1.94
Methyl violet toner, molybdated, PMA, bbls., divd. E. of Rockies. . lb.	3.25	–
Methyl violet toner, tungstated, PTA, bbls., same basis .... lb.	4.70	5.20
4,4,-Methylene dianiline (p,p-diaminodiphenyl methane) crude, dms., t.l., f.o.b ..... lb.	1.75	–
purif., flake, same basis .... lb.	2.25	–
Methylene di-p-phenylene di-isocyanate (see diphenylmethane 4,4,-di-isocyanate).		
Methylene chloride, tanks, 4,000 gal.-min., consumers, divd..... lb.	.35	–
Methylpentanediol (see Hexylene glycol).		
Methylphenylpryazolone (see 1- Phenyl-3-methyl-pyrazolone-5).		
a-Methylstyrene, f.o.b. shipping pt.. lb.	.44	–
p-Methylnaphthalene, bulk, works. gal.	1.38	–
Methylthionine chloride (see Methylene blue).		
Mica, dry-grd., joint cement, plastic, 50 lb., bgs., c.l., works .... lb.	.07½	–
dry-grd., roofing, 20 to 80 mesh. works .... lb.	.07	–
paint or lacq., wet-grd., 325-mesh, bgs., c.l., f.o.b. works..... lb.	.16¾	–
rubber, bgs., c.l., f.o.b. works.... lb.	.16¾	–
wallpaper, bgs., c.l., f.o.b. works. lb.	.22	–
Microcrystalline wax, petroleum, coating grades, FDA, tanks, works .... lb.	.36½	.46½
laminating grades, FDA, tanks, works .... lb.	.38½	.48
Mineral oil, white, 50-65 vis., USP light tanks, refy .... gal.	2.38	–
65-75 vis., tanks, refy .... gal.	2.42	–
80-90 vis., tanks, refy .... gal.	2.45	–
145-155 vis., tanks, refy ..... gal.	2.53	–
USP 180-190 vis., tanks, refy ..... gal.	2.54	–
200-210 vis., tanks, refy ..... gal.	2.56	–
340-350 vis., tanks, refy ..... gal.	2.65	–
Mineral spirits, petroleum, odorless, tanks, New Jersey. ..... gal.	1.83	1.88
Houston, Tex. .... gal.	1.78	1.79
Mineral spirits, petroleum, regular, tanks, New Jersey ...... gal.	1.41	1.49
Houston, Tex. .... gal.	1.41	1.43
Molybdate orange, bbls .... lb.	1.52	1.95
Molybdenum metal, com,l., powd., 99.8%, dms., works ...... lb.	13.50	–
Molybdenum trioxide, CP, dms., works, 24,000 lbs. or more.lb.	5.25	–
tech., chemical, dms., 24,000 lbs. or more, basis .... lb.	2.65	2.85
tech. metallurgical, dms. same basis.lb.	2.65	2.85
Molybdic acid (See Ammonium Dimolybdate)		
Monoammonium phosphate, fert. grade, min. 13% N. 52% P. bulk, c.l., f.o.b. Fla. works .... ton	155.00	–
Monoammonium phosphate, tech., bgs., c.l., t.l., works, frt. equald .... 100 lbs.	54.00	–
food grade, bgs., c.l., t.l., same basis .... 100 lbs.	59.25	–
Mono-tert-butyl-m-cresol, bulk, t.l. . lb.	1.89	–
Monobutylamine, bulk, divd ...... lb.	.96	1.00
Monochloroacetic acid, purif. (see Chloroacetic acid, mono).		
Monochlorobenzene, tanks, f.o.b. . lb.	.42½	–
Monoethanolamine, tanks, frt. alld. E .... lb.	.43	.46
Monoethylamine, 70% aqueous tanks, frt. prepaid, 100% basis... lb.	.94	–
anhyd., tanks, same basis ...... lb.	.92	–
Monoisopropanolamine, dms., c.l., frt. alld. E. .... lb.	.76	–
tanks, same basis .... lb.	.68	–
Monoisopropylamine, anhyd., dms., c.l., frt. prepaid .... lb.	.79	–
tanks, same basis .... lb.	.76	–
Monomethylamine, anhyd., tanks, contained basis frt. equald.... lb.	.54½	–
25% soln., tanks, frt. alld. 100% basis .... lb.	.57	–
40-60% soln., tanks, frt. equald. 100% basis .... lb.	.63½	–
Monopotassium glutamate, dms., 990 lb. or more, frt. alld ...... lb.	2.50	–
Monosodium glutamate, 50-lb. bgs. c.l., t.l., divd .... lb.	.76	.80
100-lb. drums, c.l., t.l., divd.... lb.	.85	–
Monosodium phosphate (see Sodiumphosphate, monobasic).		
Montan wax, crude, imp., German . lb.	.55	.57
dom., Calif., bgs., c.l., t.l., f.o.b. shipt. pt .... lb.	.61	–
refd., dom. Calif., same basis.... lb.		
Morphine alkaloid, NF, 25 k lots .. kilo	1018.00	–
Morphine sulfate, USP, 25 k lots .. kilo	850.00	–
Morpholine, dms., c.l., frt. alld. E. . . lb.	1.02	–
tanks, frt. alld., E .... lb.	.94	–
Muriatic acid (see Hydrochloric acid).		
Musk. syn., ambrette, 25-lb. cns. .. lb.	6.00	7.00
Musk. syn., ketone, dms. .... lb.	10.75	–
Musk. syn., xylol, dms. .... lb.	3.60	–
Mustard oil, syn. (see Allyl isothiocyanate).		
Mustard seed, Brown No. 1 ...... lb.	.20	–
Canadian No. 1 Yellow .... lb.	.21	–
Oriental No. 1 bgs .... lb.	.20	–
Myrcia oil (see Bay oil).		
Myristic acid, coml., pure, t.l., bgs. . lb.	1.30	–
tanks .... lb.	1.12	–
Myristica oil (see Nutmeg oil).		
Myrrh gum, bgs. .... lb.	2.25	–

N

Naphtha, high solvency (see Solvent naphtha, petroleum).		
Naphtha, petroleum, cleaners (see Cleaner's naphtha).		
Naphtha, VM&P, petroleum, tanks, New Jersey and New York .... gal.	1.29	1.34
Houston, Tex. .... gal.	1.20	–
Naphthalene, crude, dom., 78°, tanks, works .... lb.	.22	–
Naphthalene, phthalic anhydride grade, tanks, works ...... lb.	.23½	–
Naphthalene, petroleum, 80°C., f.o.b. .... lb.	.30	.32½
Naphthalene, refd., balls, flakes, whole salers, jobbers, dms., works .... lb.	.65	.77
Naphthenic acid, crude, bulk, works lb.	.30	.43
refined, 220 acid, same basis ... lb.	.80	.90
a-Naphthol, ground, dms., t.l. divd. . lb.	1.81	–
b-Naphthol, tech. flake, 80-lb. bgs., c.l., works .... lb.	1.10	–
Naphthol arylide red toner deep shades, bbls .... lb.	13.40	15.45
light shades, bbls. .... lb.	9.20	13.00
2-Naphthol-3,6-disulfonic acid, disodium salt (see R salt).		
1-Naphthol-5-sulfonic acid (see L- acid).		
1-Naphthol-5-sulfonic 8-amino acid (see S acid).		
Naphthylamine sulfonic mixed acid (see Cleve's acid).		
a-Naphthylamine, tanks, f.o.b. works .... lb.	2.10	–
1-Naphthylamine-5-sulfonic acid (see Laurent's acid).		
2-Naphthylamine-4,8 disulfonic acid (see Cassella acid).		
2-Naphthylamine-1-sulfonic acid (see Tobias acid).		
Neatsfoot oil, 20°F, t.l., f.o.b. works dms .... lb.	.52	–
tanks, f.o.b. works .... lb.	.47	–
30°F, t.l., f.o.b. works .... lb.	.52	–
tanks, f.o.b. works .... lb.	.44	–
40°F, dms., t.l., f.o.b. works .... lb.	.48	.49
tanks, f.o.b. works .... lb.	.39	–
Delivered prices apply on shipments within 300-mile radius of Philadelphia, Pa.; other areas, 1¼c. higher; Texas, 2c. higher and West Coast 3c. higher.		
Neomycin sulfate, USP, non-sterile, dms., 50-kilo. lots, activity basis, divd .... kilo.	75.00	–
Neopentyl glycol, slurry, 90%., c.l., t.l., divd .... lb.	.522	–
powder, flake, bgs. t.l., divd. . . lb.	.598	
Nerol, tech., dms. .... lb.	5.30	5.75
perf. grade, dms .... lb.	4.60	5.00
Neroli oil, Tunisian, bots .... kilo	2,700.00	–
Nerolidol syn. 55-gal. dms. .... lb.	7.05	–
Nerolin, Bromelin .... kilo	7.22	–
Niacinamide, USP, t.l. dms ...... kilo.	8.00	–
Niacin NF, dms., 5,000 kilos or more, divd. .... kilo	7.50	–
feed-grade, 98-99.5%, bgs., same basis .... kilo.	5.10	5.50
Nickel acetate, dms., 5,000-lbs. to t.l., divd. E .... lb.	1.82	–
Nickel carbonate, dms., bgs., 5,000-lbs. to t.l., divd. E .... lb.	3.45	–
Nickel chloride, bgs., 10,000-lbs. to t.l., divd. E .... lb.	1.19	–
Nickel fluoborate, liq. conc., dms., t.l., divd. E .... lb.	1.25	–
Nickel metal, electro cathodes, cs., works .... lb.	3.45	–
Nickel nitrate, dms., bgs., t.l., divd. E .... lb.	1.18	–
Nickel oxide, 75%-78% Ni, dms., 500-lb. lots, f.o.b. works ...... lb.	2.60	–
Nickel sulfate, bgs., t.l., divd. E.... lb.	.80	.90
Nicotinic acid (see Niacin).		
Nicotinamide (see Niacinamide).		
Nitric acid, 36° Be., 38°Be, 40°Be, 42°Be. tanks. c.l., works NF, 100% basis .... ton	195.00	–
94½% to 98% HNO_3, tanks, works, 100% basis .... ton	280.00	–
o-Nitroaniline, flake, dms., t.l. works .... lb.	1.51	–
molten, refd., tanks, works ..... lb.	1.44	–
molten, tech., works .... lb.	1.37	–
o-Nitroaniline, orange toner. bgs, frt. alld. .... lb.	1.90	–
p-Nitroaniline, dms., c.l., t.l., 30,000 lb. min., works .... lb.	1.63	–
o-Nitroanisole, 100-kilo lots ...... kilo	8.75	–
Nitrobenzene, tanks, f.o.b. .... lb.	.33	.34
o-Nitrochlorobenzene, dms., t.l., c.l., f.o.b. .... lb.	.82	–
tanks, same basis .... lb.	.74	–
2-Nitro-p-cresol, tech., dms., t.l., frt. alld. .... lb.	1.76	–
Nitroethane, tanks, divd. E .... lb.	2.50	–
Nitrogen solutions, direct application, over 32% N, and mgf. type, works .... unit-ton.	1.20	–
direct application, 19-32% N .... unit-ton.	1.26	1.46
Nitrogenous sewage sludge, processed, bulk, f.o.b. Chicago .... unit ton.	4.10	–
NOTE: Price is per unit NH_3 plus $1, per unit a.p.a. bulk, f.o.b. producer,s works, Chicago.		
Nitrogenous tankage, processed, bulk, per unit-ton NH_3, f.o.b. Carrolville, Wisc. .... unit ton	7.00	–
f.o.b. Forbes, Me. .... unit ton	6.75	–
expanded, bulk, c.l, per unit-ton N, f.o.b. Forrestdale, R.I. unit ton	8.35	–
Nitromethane, dms., t.l., divd. E.... lb.	2.37	–
o-Nitrophenol, dms., f.o.b. works... lb.	1.00	–
p-Nitrophenol, dms., c.l., f.o.b. works .... lb.	1.05	1.45
2-Nitropropane, tanks, frt. alld. E... lb.	.65	–
m-Nitrotoluene, tech., dms., frt. alld. lb.	1.15	–
o-Nitrotoluene, dms., c.l., f.o.b..... lb.	.65	–
tanks, same basis .... lb.	.48	.57
p-Nitrotoluene, tech. dms., c.l., works .... lb.	.83	.85
tanks, works .... lb.	.70	–
Nonylphenol, tanks, f.o.b. E. of Rockies, min. frt. alld .... lb.	.49	.53½
Norephedrine hydrochloride (see Phenylpropanolamine hydrochloride)		
Nutmeg oil, dist., East Indian, NF, dms .... kilo	32.00	34.00
Nutmegs, East Indian, whole ...... lb.	3.15	–

O

Ochre (see Iron oxide, yellow, nat.)		
Ocotea cymbarum oil dms. ...... kilo	5.15	5.20
Ocotea, Chinese 90% .... kilo	5.20	–
1-Octadecanol, syn., tanks, f.o.b. . lb.	.43½	–
l-Octanol, syn., tanks, f.o.b. ...... lb.	.70	–
n-Octene, 97% min., tanks, f.o.b. Houston, Tex. .... gal.	6.25	–
Octyl alcohol, perfumer's grade, bots., cns .... lb.	1.40	1.75
n-Octyl, n-decyl phthalate, tanks, divd .... lb.	.33½	.37
tert-Octylamine, dms., c.l., t.l., works.	2.80	–
Octylphenol, molten, t.o., works .... lb.	.75	.75½
Oiticica oil, liq. dms .... lb.	.40	–
tanks .... lb.	.32	–
Oleic acid, dbl.-dist., (white), dms.. lb.	.48	.59
tanks .... lb.	.38	.44
Oleic acid, s.d. (red) dms. .... lb.	.43	.49
tanks .... lb.	.35	.41

CHEMICAL PRICES

WEEK ENDING NOV 28, 1986

Oleum (see Sulfuric acid, fuming).		
Olibanum gum, tears, bgs .... lb.	2.10	–
Olive oil, edible, Spanish, dms. .... gal.	8.00	–
Italian B-type .... gal.	5.35	
Olivine, crude, works .... ton	12.00	–
20 mesh. works .... ton	15.00	–
100 mesh. works .... ton	20.00	–
Opium. USP, gran. powd. 25-kilo lots .... kilo	125.00	–
Orange oil, expressed, USP, Calif., dms., f.o.b. plant .... lb.	1.20	–
expressed Valencia, dms .... lb.	.75	–
Calif., dist., cns. f.o.b. plant ..... lb.	1.25	
Florida, dms. .... lb.	.60	.65
Brazilian .... kilo	.90	–
West Indian, bitter, NF X, cns., dms .... lb.	13.00	–
Orange peel, bitter, Haitian bls ..... lb.	.38	–
Oregano, Greece, 30M .... lb.	2.80	–
Turkey .... lb.	2.80	–
Mexico .... lb.	1.05	–
Origanum oil, Spanish, cns .... kilo	35.00	–
Orris root, Florentine, bls. .... lb.	4.00	–
powd., bbls., bxs .... lb.	4.60	5.00
Verona bls .... lb.	3.00	–
powd., bbls., bxs .... lb.	4.60	5.00
Ouricury wax, refd., pure, bgs ..... lb.	3.25	3.35
Oxalic acid, bgs., c.l., works ...... lb.	.44	–
b-Oxynaphthoic acid dms. works, tech .... lb.	2.55	–
Oxyquinoline base, pure, 1,000 lbs., frt. alld .... lb.	8.00	–
Oxyquinoline sulfate, 100 lbs. frt. alld .... lb.	4.00	–

P

Palladium metal, works .... Troy-oz.	NA	–
Palm oil, (see Oils, Fats & Waxes Market Report)		
Palm oil acid, dbl-dist. dms .... lb.	.31½	–
tanks .... lb.	.30	–
s.d., dms .... lb.	.42	.45
tanks .... lb.	.35	–
Palm kernel oil, bulk, c.i.f., U.S. ports .... lb.	.18½	19¼
Palmarosa oil, Indian dms .... kilo	42.00	–
Palmitic acid, 90%, tech., bags .... lb.	.53	–
tanks .... lb.	.51	–
Papaverine hydrochloride, NF powd., imp. bulk .... kilo	56.00	–
Paprika, Hungarian, 100 AU bgs. . . lb.	.80	–
Spanish, 110 AU bgs .... lb.	.90	–
Paraffin, fully-refd., 127-130 F., ASTM, tanks, refy	.29	.35
130-135 F., ASTM, tanks, refy.	.33½	.39
140-145 F., ASTM, tanks, refy.	.35	.41½
150-155 F., ASTM, tanks, refy.	.41½	.46
slack wax, 5% oil, tanks refy	.19	–
12% oil, tanks refy	.21	–
20% oil, tanks refy	.16	–
AMP temperatures are an arbitrary 3F higher than ASTP.		
Paraformaldehyde, 91%, flake, bgs. c.l., t.l., divd .... lb.	.29½	–
95%, powd., bgs., c.l., t.l. divd. lb.	.39½	–
Paraldehyde, tech., 98%, 55-gal. dms., t.l., divd. E .... lb.	.76½	–
tanks, divd. E. .... lb.	.58½	–
Parathion, ethyl, dms., frt. alld ..... lb.	1.75	–
Parathion methyl (see Methyl parathion).		
Para toner red, bbls .... lb.	3.75	–
chlorinated, (red 4) kgs .... lb.	3.75	–
Patchouli oil, Indonesian., dms.... kilo	18.50	20.00
Patchouli oil, Chinese .... kilo	19.00	21.00
Peach kernel oil, USP (see Apricot kernel oil).		
Peanut meal (see Oils, Fats & Waxes market report).		
Peanut oil (see Oils, Fats & Waxes market report).		
Pectin dom., NF, citrus, powd., 100-kilo lots divd. .... lb.	3.30	3.70
Pelargonic acid, nat., tanks, min. frt. alld .... lb.	.70	–
syn., tanks, f.o.b. frt. alld.... lb.	.70	–
Penicillin, potassium, non-sterile, 200-billion-unit lots,... billionunits	25.00	30.00
Penicillin, procaine, sterile 50- billion-unit lots, bulk.... billion units.	36.00	–
Pennyroyal oil, dms. .... lb.	10.25	–
Pentachlorophenol, 50-lb. bgs., t.l., f.o.b. Wichita, Kan. ...... lb.	.55	–
Pentaerythritol, tech., bgs., c.l., f.o.b., frt. alld .... lb.	.71	.72
Pentaerythritol, di- and tri-isomers (see Dipentaerythritol and Tripentaerythritol).		
Pentaerythritol triacrylate, t.l. dms., f.o.b. works .... lb.	1.50	–
Pentobarbital, dms., 100 lbs. or more, frt. alld .... lb.	7.00	–
Pentobarbital-sodium, dms., 100 lbs. or more, divd .... lb.	14.00	–
Pentylene tetrazol, NF, dms., 200-kilo lots .... kilo	32.00	–
Pepper, black, Brazilian, bgs. ..... lb.	2.35	–
Lampong, bgs .... lb.	2.37	–
Malabar, bgs .... lb.	2.37	–
Tellicherry, bgs .... lb.	2.45	–
Pepper, red Chinese Fukien rice bgs lb.	.89	–
Hainan, bgs .... lb.	1.00	–
Uing, bgs .... lb.	.78	–
Indian, S-4, bgs .... lb.	.70	–
Pakistan, dundicuts, bgs. .... lb.	.43	–
Pepper, white, Muntok, bgs .... lb.	3.05	–
Peppermint leaves, imp., dms ..... lb.	2.00	–
Peppermint oil, Madras .... lb.	14.00	–
Midwest .... lb.	15.00	–
Willamette .... lb.	11.00	–
Yakima .... lb.	8.00	–
syn., dms. f.o.b. works .... lb.	7.00	9.00
Brazilian .... kilo	6.60	–
Chinese .... kilo	6.90	–

CHEMICAL PRICES

WEEK ENDING NOV 28, 1986

Perchloroethylene, dry cleaning grade, distr., tanks, divd. ... lb.	.28½	–
Indust., grade, consumers, tanks, divd. ... lb.	.31	–
Perl acid. dms. ... lb.	2.55	–
Permanent rod 2B, (red 48), calcium salts, dms, frt. alld. ... lb.	5.25	–
barium salts, same basis ... lb	5.25	–
Peru balsam, f.o.b. ... lb.	3.25	–
Petitgrain oil, Paraguay ... lb.	5.00	–
Petrolatum, USP, snow white, dms., c.l., refy ... lb.	.375	–
tanks, refy ... lb.	.310	–
USP, soft white, dms., c.l., refy. . lb.	.375	–
tanks, refy ... lb.	.310	–
USP, lily white, dms., c.l., refy ... lb.	.370	–
Petrolatum, USP, Lily white, tanks, refy ... lb.	.305	–
USP, cream, dms., c.l., refy ... lb.	.365	–
tanks, refy ... lb.	.30	–
USP, soft yellow, dms., c.l., refy. . lb.	.350	–
tanks, refy ... lb.	.285	–
USP, amber, dms., c.l., refy ... lb.	.345	–
tanks, refy ... lb.	.280	–
Petroleum pitch (see Asphalt, petroleum)		
Petroleum sulfonate, 60-62%, sulfonic cont., HMW, bulk, works . . lb.	.48½	.49
MMW, same basis ... lb.	.49	–
LMW, same basis ... lb.	.49	.49¼
Prices for 51% sulfonic content 2c per lb. lower on corresponding molecular wts.		
Phenacetin USP, powd., 200-lb. dms., 1,000-lb. lots, divd. ... lb.	2.20	–
100-lb. dms., 1,000-lb. lots, divd. lb.	2.22	2.45
p-Phenetidine, dms., c.l., f.o.b. ... lb.	2.00	–
Phenobarbital, USP, dms., 500-kilo lots., f.o.b. works ... kilo	19.50	–
Phenobarbital-sodium, NF, 500-kilo lots, f.o.b. works ... kilo	27.00	–
Phenol, syn. tanks, frt. equald. ... lb.	.25	.29
p-Phenolsulfonic acid, 65% sol'n., dms., c.l., fob works ... lb	.64	–
tanks, same basis ... lb.	.58	–
Phenothiazine, indust. grade, 50-lb. bags, c.l., f.o.b. works ... lb.	2.33	–
purif. grade, same basis ... lb.	2.69	–
Phenyl acetate, dms., 100-lb. lots, works ... lb.	1.04	–
Phenylacetic acid, pure cryst., 25-lb. cns. ... lb.	4.50	–
dl-Phenylalanine, dms., 25-kilo lots ... kilo.	84.00	–
1-Phenyl-3-carbethoxy pyrazolone-5, dms 200-lb. lots, divd. E. . lb.	3.45	–
m-Phenylenediamine, cast, dms., c.l., t.l., f.o.b works ... lb.	2.07	–
o-Phenylenediamine, flaked, dms, t.l., f.o b. works ... lb.	3.25	–
p-Phenylenediamine, flaked, dms., f.o.b. works ... lb.	4.00	–
Phenylephrine hydrochloride, USP 100-kilo lots or more ... kilo.	175.00	185.00
Phenylethyl acetate, dms ... lb.	3.35	–
2-Phenylethyl alcohol, NF, dms. ... lb.	2.10	2.20
b-Phenylethylamine, dms., 30,000 lbs. or more, frt. alld. ... lb.	1.50	–
Phenylethylphenyl acetate, 25-lb. cns. ... lb.	5.50	6.90
Phenylglyconic acid (see Mandelic acid).		
Phenylhydrazine, 99% min, dms. . . lb.	3.50	–
1-Phenyl-3-methyl-5-pyrazolone, dms., 250-lb. lots divd. E. . lb.	1.80	–
o-Phenylphenol, dms., t.l., works . . lb.	1.35	2.00
p-Phenylphenol, bgs., t.l., 40,000 lbs. or more, works ... lb.	1.85	–
Phenylpropanolamine hydrochloride, 100-kilo dm. ... kilo	24.00	28.00
Phenylsalicylate, purif. cryst., dms., E. ... lb.	2.75	–
tech., cryst., E. ... lb.	2.25	–
flake, E. ... lb.	2.35	–
Phloxine toner (red 90), dms., frt. alld. ... lb.	1.95	2.05
Phosgene, 1-ton ret. cyls., 5 to 9-cyl. quantities, works ... lb.	.55	.67
Phosphate rock, Fla., land pebble, run of mine washed, 66-68% b.p.l bulk c.l. mines ... ton	23.15	–
vessel, Tampa, same basis ... ton	28.00	–
Phosphoric acid, com'l. and tech. grades, 75% tanks, works ... 100 lbs.	29.00	–
80% tanks, works ... 100 lbs.	31.00	–
85%, N.F. tanks, f.o.b. freight equald. ... 100 lbs.	33.50	–
Food grade prices $2.00 above tech. grade.		
Phosphoric acid, agricultural grade, 52-54% a.p.a., tanks, works ... unit-ton	3.10	–
super, min. 70% a.p.a., same basis ... unit-ton.	3.45	–
Phosphorus, white (yellow) solid dms., c.l., works, frt. equald. ... lb.	1.00	–
tanks, works, f.o.b. works . lb.	.91	–
Phosphorus oxychloride, tanks, frt. equald. ... lb.	.40	–
Phosphorus pentasulfide, powd., dms, c.l., works ... 100 lbs.	50.00	–
tote bins, sellers ... 100 lbs.	45.00	–
Phosphorus pentoxide, dms., t.l., works ... lb	.82	–
Phosphorus sesquisulfide, dms., cvs., c.l., works ... lb.	.38	–
Phosphorus trichloride, dms, c.l., works ... lb.	.40	–
tanks, works ... lb.	.35	–
Phthalic anhydride, flake, c.l., t.l., dms, frt. equald. ... lb.	.30	–
molten, tanks, same basis ... lb.	.27	–
Prices 1-1½c. per lb. higher on the West Coast		
Phthalimide, flake, works ... lb.	.85	–
Phthalocyanine blue toner, red shade, bbls, frt. alld. E. of Rockies ... lb.	9.45	
green shade, same basis ... lb.	9.30	
resinated, bbls., same basis ... lb.	9.10	
Phthalocyanine blue toner, water dispersable, bbls., same basis ... lb.	9.45	17.30
Phthalocyanine green toner, all grades, bbls., frt. alld. E. of Rockies ... lb.	9.30	14.00
Phthalocyanine green toner, resinated, bbls., same basis ... lb.	8.65	9.45
Phthalylsulfacetamide, dms., 500-kilo lots ... kilo.	8.61	–
Picolines, refd, mixed, bulk ... kilo	2.81	–
Picric acid, pure paste, 25-lb. ctns., c.l., dry basis, f.o.b. Charlotte, N.C. ... lb.	6.00	–
tech., paste, 25-lb. ctns., t.l., dry basis, f.o.b. Charlotte, N.C. . . lb.	5.00	–
Pigment green B, kgs ... lb.	2.20	–
Pilocarpine hydrochloride, USP, dms. ... kilo.	1,500.00	2,000.00
Pimento see Allspice		
Pimento leaf oil, dms. ... lb.	13.90	–
Pine oil, 80% min. alcohol content, bulk, f.o.b. works ... 100 lbs	47.00	53.00
dms., c.l., t.l., same basis ... 100 lbs	51.00	54.00
a-Pinene, perfume grade ... kilo	1.62	–
tech. grade ... lb.	.18	.23
b-Pinene, perfumery grade. tanks. . kilo	2.30	–
tech. grade. tanks ... lb.	.35	.40
Piperazine, anhyd., dms., t.l., frt. alld. E. ... lb.	1.80	–
Piperazine citrate, 36%, dms., 1,100-lb. lots, frt. alld. ... lb.	2.25	2.35
Piperazine dihydrochloride, 53%, dms., t.l., frt. alld. ... lb.	2.00	–
Piperazine hexahydrate, 44%, dms., 1,100-lb. lots, frt. alld. ... lb.	1.60	–
Piperazine phosphate, 42%, dms., t.l., frt. alld. ... lb.	1.80	–
Piperidine dist. 98% min., dms., c.l., t.l., works ... kilo.	6.92	–
Piperonyl butoxide dms., divd. E. . . lb.	5.00	–
Platinum, metal, works ... Troy oz.	478.00	–
Polycarbonate resin, pellets, nat., t.l., frt. alld ... lb.	1.84	1.86
Polyester resin, unsaturated, g.p., orthophthalic, bulk, tankcars, frt. alld ... lb.	.51	.53
isophthalic, same basis ... lb.	.56	.62
Polyethylene resin, high-density, blow molding, g.p., hopper cars, frt. alld. ... lb.	.44	.52
injection molding, g.p., hopper cars, frt. alld. ... lb.	.43	.46
extrusion, g.p., hopper cars, same basis ... lb.	.47	.48
wire and cable, nat., hopper cars, same basis ... lb.	.54	.65
wire and cable, black, same basis ... lb.	.65	.75
Polyethylene resin, low-density, film liner, hopper cars, frt alld . . lb.	.35	.36
clarity film, hopper cars, frt., alld. ... lb.	.35	.37
pallet shrink film, hopper cars, same basis ... lb.	.35	–
extrusion coating, hopper cars, same basis ... lb.	.38	.42
g.p., hopper cars, same basis . lb.	.37	.38
Polyethylene linear low-density g.p. resin ...	.36	.40
blown film resin ...	.40	.43½
cast film resin ...	.40	.45
Polyethylene resin, low-density injection molding, g.p., hopper cars, same basis ... lb.	.45	.48
fine wire, CATV, power cable. . lb.	.70	1.15
wire and cable thermoplastic high-voltage, natural color, same basis ... lb.	.80	.90
wire and cable, XLPE low voltage, 14% carbon black, same basis ... lb.	.68	.73
wire and cable jacketing, black lb.	.60	.61
Polymyxin sulfate, USP, bulk, 50-billion units min. ... million units	.52	–
Polyoxyethylene sorbitan monostearate, dms., 20,000-lb. lots, works ... lb.	.73	–
Polyoxyethylene sorbitan tristearate, dms., 20,000-lb. lots, works ... lb.	.73	–
Polypropylene resin, homopolymer, g.p., nat., t.l., frt. alld ... lb.	.45	.48
copolymer, med. impact, nat., same basis ... lb.	.50	.56
high impact, same basis ... lb.	.53	.60
Colored material 6c. per lb. higher for each grade.		
Polystyrene resin, cryst., nat., hopper cars, frt. alld. ... lb.	.48	–
impact, nat., hopper cars, same basis ... lb.	.51	–
high heat, high impact, nat., hopper cars, same basis ... lb.	.52	–
expandable beads (EPS), pkging grade, 1,000-lb. lots ... lb.	.69	–
modified, same basis ... lb.	.73	–
Polyvinyl alcohol, fully hydrolyzed, medium viscosity, bgs., t.l., divd. ... lb.	1.00	1.05
partially hydrolyzed, medium viscosity, bgs., t.l., divd. ... lb.	1.05	–
Polyvinyl chloride resin, g.p., homopolymer dispersion, bgs., t.l., divd. ... lb.	.50	–
g.p. suspension, bulk, same basis ... lb.	.38	–
pipe grade, bulk, same basis ... lb.	.47	–
film grade, bulk, same basis ... lb.	.37	.47
Polyvinyl chloride, g.p. copolymer dispersion, same basis ... lb.	.58	.61
g.p. copolymer suspension, same basis ... lb.	.45	.49
Poppyseed, Dutch, bgs. ... lb.	.59	–
Turkey, bgs. ... lb.	.53	–
Potash agricultural (see Potassium muriate).		
Potash, caustic, liq., 45% basis, tanks, works ... 100 lbs.	13.00	–
West Coast, 50% basis, tanks, ex terminal ... 100 lbs.	18.06	–
reg. flake, 88-92%, 400-lb. dms., c.l., works ... 100 lbs.	42.35	–
Potassium acetate, NF, gran., dms., t.l., works E. ... lb.	.90	1.31
Potassium bicarbonate, tech., gran., bgs., c.l., works ... lb.	.31½	–
Potassium bicarbonate, USP, gran., dms., t.l. ... lb.	.72	–
Potassium bichromate, gran., 400-lb. dms., c.l., t.l., works ... lb.	.48	–
Potassium bifluoride, tech., dms., t.l., works., frt. equald. ... lb.	.45	.49
Potassium bitartrate, NF, gran., powd., bgs. ... lb.	.90	1.20
Potassium borohydride, powd. dms., 100-1,000 lbs., works ... lb.	18.00	20.00
Potassium bromate, gran., powd., 200-lb. dms., c.l., f.o.b. works ... lb.	1.06	–
Potassium bromide, NF., gran., dms., c.l. f.o.b. works ... lb.	1.12	–
Potassium carbonate, liq., 47% K_2CO_3, tanks, t.w., works ... 100 lbs.	14.60	–
dms., c.l., t.l., works ... 100 lbs.	20.65	–
calcined, 99-100% K_2CO_3, hopper cars or trucks, works ... 100 lbs.	32.50	–
bgs., c.l., t.l., works ... 100 lbs.	35.20	–
drums ... 100 lbs.	36.40	–
Potassium carbonate, gran., purif., 400-lb. dms., 5-dm. lots . . . lb.	.40	.46
Potassium chlorate, cryst., dms., c.l., works ... lb.	.14½	–
powd., dms., c.l., works ... lb.	.30	–
purif., gran., 325-lb. dms., f.o.b. shipping point ... lb.	.40	–
Potassium chloride, chemical grade, 99.95% KCl, bulk, c.l., f.o.b works ... ton	105.00	–
USP cryst. dms ... lb.	1.12	–
USP gran., dms ... lb.	.67	–
USP powd., dms ... lb.	.67	–
Potassium chloride, agricultural (see Potassium muriate).		
Potassium chromate, purif., cryst., dms., works ... lb.	.57	–
Potassium citrate, NF, gran., 200-lb. dms., frt. alld. ... lb.	.93½	–
Potassium cyanide, dms., 20,000-lb. lots or more, f.o.b. works. . lb.	1.32	–
Potassium dichromate (see Potassium bichromate).		
Potassium fluoborate, tech., dms., c.l., t.l., works, frt. equald. ... lb.	1.40	1.42
Potassium fluoride, anhyd., dms., t.l. ... lb.	1.68	–
Potassium gluconate, dms., t.l., f.o.b. works ... lb.	1.45	–
Price W. of Denver 4c. per lb. higher.		
Potassium guaiacolsulfonate, 300-lb. dms., 600 lbs. or more frt. equald. ... lb.	2.10	–
Potassium hydroxide, tech. (see Potash, caustic).		
Potassium hydroxide, USP, pellets, 100-lb. dms., c.l., t.l., works, frt. equald. ... lb.	1.31	1.33
Potassium iodide, USP, gran., cryst., dms., 1,000-lb. lots divd. . . lb.	10.72	12.39
ACS grade truckload ... lb.	11.32	13.55
Potassium-magnesium sulfate, std., bgs., works ... ton	59.00	–
basis 40% K_2SO_4 and 55% $MgSO_4$ bulk, works ... ton	67.00	–
Potassium metabisulfate, gran., dms. t.l. ... lb.	.44	–
Potassium muriate, 60-62.4% min. K_2O, std., bulk, c.l., frt. equald., f.o.b. Sask., Canada ... ton	52.00	53.00
soluble, fine std., f.o.b. Sask. ... ton	53.50	54.50
coarse, f.o.b. Sask. ... ton	57.00	58.00
gran., f.o.b. Sask. ... ton	58.50	59.50
Potassium nitrate, fert. grade, std., 50-ton c.l., divd. SE. ... ton	267.00	274.00
prilled ... ton	277.00	284.00
tech., gran., bgs., c.l., min. 50 tons, divd. ... ton	470.00	–
Potassium oxalate, neutral. tech., fine gran., powd., 300-lb. dm., frt. equald. ... lb.	2.54	–
Potassium pentaborate, gran., bgs., c.l., works ... lb.	1.01	–
dms., same basis ... lb.	1.06	–
Potassium pentaborate powder 15c. per lb. higher.		
Potassium perchlorate, dms. c.l., works ... lb.	.78	–
Potassium permanganate, free flowing, bulk, hopper trucks, works ... lb.	1.09	–
50-kg. dms., same basis ... lb.	1.20	–
150-kg. dms., same basis ... lb.	1.17	–
Potassium permanganate, USP, 50-lb. kgs., works, c.l., t.l. ... lb.	1.38	–
Potassium persulfate, 225-lb. dms., 24,000 lbs. or more, f.o.b. plant ... cwt.	78.80	–
cl/tl same basis ... cwt.	72.50	–
Potassium pyrophosphate tetrabasic, bgs., c.l., t.l., works, E., frt. equald. ... 100 lbs.	63.75	64.00
liquid, bulk ... 100 lbs.	46.00	49.50
Potassium salicylate, USP, gran., 200-lb. dms., 2,000 lbs. or more, works. frt. alld. ... lb.	1.52	–
USP, powd., 300-lb. dms., 2,000 lbs. or more, same basis ... lb.	1.42	–
Potassium silicate, soln., 29.8-30.2 Be., 2.5 ratio, t.c., t.t., works ... 100 lbs.	18.90	–
dms., c.l., t.l., works. 100 lbs.	25.90	–
Potassium silicate, 40-40.5 Be., 2.1 ratio, t.c., t.t., works ... 100 lbs.	25.05	–
40-40.5 Be., 2.1 ratio, dms., c.l., t.l., works ... 100 lbs.	32.05	–
Potassium silicate, electronics grade, 30-30.4 Be., 2.1-2.2 ratio, t.c., t.t., works ... 100 lbs.	26.10	–
dms., c.l., t.l., works. 100 lbs.	33.10	–
solid or glass, 2.15 ratio, dms., c.l., t.l., works ... 100 lbs.	53.30	–
solid or glass, 2.5 ratio, dms, c.l., t.l., works ...	45.65	–
"Ratio" indicates percentage by weight of SiO_2 divided by percentage by weight of K_2O.		
Potassium silicofluoride, bgs., c.l., t.l., frt. equald ... lb.	.11½	.16
Potassium-sodium tartrate, NF, gran. or powd., dms ... lb.	.80	1.20
Potassium sorbate, t.l. dms., divd. . lb.	2.50	3.10
Potassium stannate, dms., frt. alld. . lb.	N.A.	–
Potassium sulfate, agricultural grade, min. 50% K_2O std., bulk, c.l., f.o.b. works ... ton	150.00	160.00
Potassium sulfate, gran., purif. 400-lb. dm. ... lb.	.86	–
Potassium tetraborate, gran., bgs., c.l. works ... lb.	1.10	–
dms., same basis ... lb.	1.15	–
Potassium tetraborate powder 15c. per ton higher		
Potassium thiocyanate, USP, cryst., 225-lb. dms., 5-dm. lots. . . lb.	4.01	–
tech., cryst., dms., t.l. ... lb.	.82	–
Potassium titanate, ctns., c.l., works ... lb.	.71¾	–
Potassium-titanium fluoride, tech., dms., t.l., works, frt. equald lb.	1.24	1.59
Potassium-zirconium fluoride, tech., dms., t.l., works, frt. equald. ... lb.	.78	–
Prednisone USP. dms., 5 kilos or more ... gram	1.03	–
Prednisolone acetate, USP, dms., 5 kilos or more ... gram	1.12	–
Prednisolone, anhyd., USP, dms., 5 kilos or more ... gram	1.12	–
Procaine hydrochloride, USP, antibiotic grade, dms., 2,000-lb. lots, frt. alld ... lb.	4.95	5.75
Procaine hydrochloride, USP, ampule grade, dms., 1,000-lb. lots, frt. alld. ... lb.	4.95	5.50
Propionaldehyde, tanks, f.o.b. ... lb.	.35½	–
Propionic acid, syn., pure, tanks, divd. E. ... lb.	.33	.34½
n-Propyl acetate, tanks, divd. ... lb.	.53½	–
n-Propyl alcohol, tanks, divd. ... lb.	.42	.44
n-Propyl gallate dms., 100 to 2,000-lb. lots, divd. ... lb.	11.50	–
n-Propyl-p-hydroxybenzoate, USP, 500 kilos ... kilo	10.80	–
tech., 500 kilos, f.o.b. ... kilo	10.38	–
Propyl paraben (see n-Propyl-p-hydroxybenzoate)		
Propyl thiouracil, dms., 50-kilo lots or more ... kilo.	65.00	–
n-Propylamine, dms., c.l., divd. ... lb.	.75	.80
Propylene, polymer grade, f.o.b. Tex. and La. Gulf Coast points . lb.	.17¾	–
chemical grade same basis ... lb.	.15¾	.16
Propylene glycol, indust., tanks, f.o.b. lb.	.40	.41
USP, tanks, f.o.b. E. ... lb.	.43	.44
Propylene glycol monomethyl ether, tanks, divd. E. ... lb.	.49	–
Propylene oxide, tanks, f.o.b. works, frt. equald. ... lb.	.47½	–
Psyllium seed, USP powd bgs. ... lb.	1.60	1.75
Pumice, dom., fine, 4F-0, bgs., ton lots ... ton	270.00	–
medium, 0½-1½, bgs., ton lots . ton	300.00	–
coarse, 2-extra coarse, bgs., ton lots ... ton	300.00	–
Pumice, imp., Italian, fines, bgs., ton lots f.o.b. East Coast ... ton	280.00	–
medium, bgs., ton lots. f.o.b. East Coast ... ton	350.00	–
coarse, bgs., ton lots f.o.b. East Coast ... ton	300.00	–
Pyrazolone red (red 38), dms., works ... lb.	13.00	15.45
Pyrethrum flowers, fine grd. 0.9% pyrethrins. ton lots, frt. alld. lb.	1.91	–
Pyrethrum, purif., 20% pyrethrins, dms., works ... lb.	37.50	37.75
Pyridine, refd., 2-deg., c.l., works dms. ... kilo	5.90	–
tanks ... kilo	5.70	–
Pyridoxine hydrochloride, USP, 100 kilos or more, divd. ... kilo.	36.00	–
Pyrites, Canadian 48-50% S. mines ... long ton	4.50	5.00
Pyrogallic acid (see Pyrogallol)		
Pyrogallol, 100-lb. dms., 1,000-lb., lots, divd. ... lb.	13.70	15.25

Q

Quassia chips ... lb.	.57	–
Quinacridone maroon, dms., frt. alld. ... lb.	27.00	35.20
red, dms., frt. alld. ... lb.	24.25	32.30
violet, dms., frt. alld. ... lb.	24.90	–
Quince seed, bgs. ... lb.	2.00	2.75
Quinidine sulfate, USP, 1,000-oz. dms., 2,000 oz. or more. . oz.	4.20	4.25
Quinine hydrochloride, NF, 1,000-oz. dms., 2,000 oz. or more. . oz.	2.45	2.50
Quinine sulfate, USP XVIII, 1,000-oz. dms., 2,000 oz. or more. . oz.	2.30	2.50
Quinoline, dms., t.l., frt. equald. ... lb.	1.49	–
tanks, same basis ... lb.	1.43	–

R

R salt tech., 304 molecular wt. ... lb.	2.12	–
Racemethionine, USP, 50-250 kilos ... kilo	6.80	–
250-500 kilos ... kilo	6.60	–
500 or more kilos ... kilo	6.50	–
feed grade, 99% min., c.l., t.l. ... lb.	1.07	–
Rapeseed oil, dms. ... lb.	.58½	.62½
Rauwolfia serpentina root, powd. bls., dms. ... kilo.	22.00	–
Red carmine. No. 40 (see Carmine No. 40)		
Red precipitate. (see Mercuric oxide, red).		
Reserpine, USP, cryst., bots. ... gram.	.40	.47½
Resorcinol tech., bgs., t.l., works. divd. ... lb.	3.96	–
Resorcinol, USP, cryst., dms. 50 kilos or more, works ... kilo.	9.35	–
powd. dms., same basis ... kilo.	9.90	–
Resorcinol monoacetate, dms., 1,000 lbs. or more ... lb.	1.98	–
Rhodamine red toner, molybdated, PMA, dms., works ... lb.	9.25	–
tungstated, PTMA, dms., f.o.b. works ... lb.	11.50	14.09
Rhodinol, 25-lb. cns. ... lb.	105.00	105.10
syn., dms. ... lb.	15.25	.58
Rhubarb root, India, whole, bgs. ... lb.	.45	.70
powd., bgs. ... lb.	.61	–
Riboflavin, feed grade, 25 kilos, divd. ... kilo.	34.50	–
Riboflavin, USP, 25 kilos, divd. ... kilo.	48.50	–
Riboflavin 5-phosphate-sodium, 25-kilo lots ... kilo.	136.00	–
Rice bran oil, refined dms. t.l. ... lb.	1.25	–
Ricinoleic acid (see Castor oil acids, split).		
Rochelle salt (see Potassium-sodium tartrate).		
Roofing pitch (see Coaltar pitch, roofing.)		
Rose oil, nat., NF, Bulgarian, otto. bots ... kilo.	5,700.00	–
Turkish, otto., bots. ... kilo.	6,500.00	7,500.00
Rosemary oil, NF, Spanish, dms. . kilo	9.00	11.00
Tunisian, dms. ... kilo	15.00	17.50
Rotenone resin, 30-45%, 100-lb. dms. works ... unit-lb.	.21	.23

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Saccharin NF, gran., soluble, dms. 1,000-lb. lots, frt. alld. ... lb.	2.50	2.75
Saccharin NF, powd., soluble, dms., less than 20,000-lb. lots, frt. alld. . lb.	3.75	–
Safflower oil, non-break. tanks, N.Y. . . lb.	.50	–
edible dms., N.Y., divd. ... lb.	.78	.80
Sage leaves, Dalmatian, No. 1, bgs. lb.	1.95	–
Albanian, bgs. ... lb.	1.65	–
Turkish ... lb.	1.25	1.30
Sage oil, Clary, French, bots. ... kilo	165.00	180.00
Dalmatian, cns. ... lb.	14.50	–
Spanish, cns. ... kilo	19.00	21.00
Salicylaldehyde, tanks, f.o.b. ... lb.	3.60	–
Salicylamide, NF, gran., powd., dms., 2,000-lb. lots, one ship. ... lb.	1.07	1.10
Salicylic acid, tech., dms., c.l., t.l., works ... lb.	1.23	1.41
USP, cryst., dms., 1,000 lbs. or more ... lb.	1.33	1.63
USP, powd., dms., 1,000 lbs. or more ... lb.	1.68	–
Salol (see Phenylsalicylate).		
Salt, evaporated, common, 80-lb. bgs., c.l., t.l., North, works. . 80 lbs.	4.02	–
bulk, same basis ... ton	60.00	61.20
chemical grade, same basis. . 80 lbs.	4.30	–
Salt, rock, medium, coarse, same basis ... 80 lbs.	2.70	–
bulk, same basis ... ton	18.00	25.00
Saltcake, dom., bulk, works, 100% Na_2SO_4, basis, f.o.b. works E ton	65.00	98.00
same basis W ... ton	90.00	99.00
Sandalwood oil, E. Indian ... kilo	185.00	–
Indonesia ... kilo	102.00	–
Sarcosine, tech., tanks, works, frt. equald. ... lb.	.50	–
Schaeffer's salt, paste, dms., 100% basis, works ... lb.	2.69	–
Scopolamine hydrobromide, USP, 100-oz. lots bots. ... oz.	36.00	46.50
Sebacic acid, CP, bgs., c.l., works. . lb.	1.95	–
purif., bgs., c.l., works ... lb.	1.94	–
Seidlitz mixture, dms., 5,000-lb. lots. lb.	.30½	–
Selenium, powd., 99.99% Se, dms., divd ... lb.	13.00	–
coml., 99.5% Se, same basis ... lb.	10.00	15.00
Senna leaves, Alexandria, whole and half, bls. ... lb.	.75	.80
Tinnevelly, No. 1, bls. ... lb.	.70	.71
powd., bbls., bxs. ... lb.	.90	1.10
Sesame oil, USP, dms., l.c.l. ... lb.	1.00	1.20
Sesame seed, Central American, hulled, bgs. ... lb.	.55	.56
Sienna pigment, burnt, paper bgs., l.c.l., works ... lb.	.19½	.28½
raw, paper bgs., l.c.l., works ... lb.	.18¼	.23¾
Silica, amorph. dry-grd., bgs., c.l., works 93%, 200 mesh. . . ton	31.00	32.50
98%, 200 mesh ... ton	32.00	33.50
93%, 97%, 325 mesh ... ton	34.50	35.50
98.5%, 325 mesh ... ton	37.00	–
99.5%, 325 mesh ... ton	51.50	54.50
Silica, dry-grd., bgs., c.l., works. 99.9%, 400 mesh, micronized ... ton	72.00	75.50
99% under 15 microns, micronized ... ton	79.50	82.50
99% under 10 microns, micronized ... ton	104.00	105.00
Silica, hard-quartz, 99.5% SiO_2, 325 mesh, bgs., c.l., works . . . ton	37.00	–
140 mesh, bgs., c.l., works . . . ton	34.75	–
Silicon tetrachloride, tech., dms., c.l., works ... lb.	.50	–
tanks, works ... lb.	.36	–
Silver bullion, ingots, cs., Troy ... oz.	5.24	–
Silver cyanide, 80% Ag. 500-oz. lots oz.	4.20	–
Silver nitrate, ACS, 58.2 Troy oz. AG/100 avoir. oz. $AgNO_3$ ... oz.	3.139	–
Soapbark, crushed, bls. ... lb.	1.00	–
powd., bls ... lb.	1.35	1.85
Soda ash, dense, 58%, 100-lb., paper bgs. c.l., works, f.o.b. ... ton	120.00	–
bulk, c.l., same basis ... ton	83.00	–
light 58%, 100-lb., paper bgs., c.l., same basis ... ton	150.00	–
bulk, c.l., same basis ... ton	123.00	–
Soda, caustic, liq., 50%, sellers tanks, Gulf Coast works, f.o.b., frt. equal., 76% Na_2O ... ton.	175.00	195.00
73%, same basis ... ton.	205.00	225.00
flake, 76%, 400-lb. dms, c.l. works . ton.	500.00	570.00
solid, 76%, 700-lb. dms, c.l., works ... ton.	520.00	570.00
gran., 76%, 450-lb. dms, c.l, works ... ton.	520.00	–
beads, 76%, 400-lb. dms., c.l., works ... 100 lbs.	27.50	28.50
Prices for liq. rayon-type, $15 ton higher. Prices in West 70c. higher for solid, and $20-$30 ton higher for gran. and beads.		
Soda, sal, conc., bgs., c.l. works ... 100 lbs.	3.35	3.85
Sodium acetate, anhyd., bgs., c.l., f.o.b. works ... lb.	.54	–
Sodium acetate, USP, 60%, gran. 100-lb. dms., c.l., works ... lb.	.57	–
Sodium alginate, NF, white powd., dom., 300 lbs. or more ... lb.	6.00	6.75
Sodium p-aminosalicylate, dms., 100-lb. lots or more, f.o.b. works ... lb.	4.73	–
Sodium antimonate, bgs., c.l., divd. E. lb.	1.49	1.50
Sodium ascorbate, USP, dms., 100 kilos ... kilo.	9.30	10.60
Sodium benzoate, tech., bgs., c.l., t.l., frt. alld. ... lb.	.70½	–
Sodium benzoate, USP, 50-lb. bgs., c.l., t.l., frt. alld. ... lb.	.83½	–
ton-lots, same basis ... lb.	.86½	–
100-lb. dms., c.l., t.l., same basis. lb.	.89	–
ton-lots, same basis ... lb.	.92	–
Sodium bicarbonate, USP, powd., reg. grade, bgs., c.l., t.l., works, frt. equald. ... 100 lbs.	17.05	–
coarse, same basis ... 100 lbs.	18.05	–
fine, same basis ... 100 lbs.	17.20	–
gran., same basis ... 100 lbs.	17.85	–
gran., fine, same basis ... 100 lbs.	17.60	–
Sodium bichromate, gran., bgs. c.l., t.l., works, frt. equald. ... lb.	.57	–
Sodium bifluoride, 400-lb. dms., c.l., frt. equald. ... lb.	.78	–
100-lb. bgs., c.l., same basis ... lb.	.78	–
Sodium bisulfate, bulk, c.l., works . . . ton	175.00	–
dms., c.l. ... 100 lbs.	13.00	–
Sodium bisulfite, anhyd. bgs., c.l., t.l., works, East ... 100 lbs	28.50	–
works, West ... 100 lbs.	32.00	–
Sodium bisulfite, soln., 38%, bulk, 100% basis, works, East ... 100 lbs.	20.60	–
soln., 100%, bulk, works, West 100 lbs.	20.00	–
photographic grade, 43% soln., works ... 100 lbs.	21.90	–
Sodium borate NF, gran., bgs., c.l., works ... lb.	.51	–
powd., same basis ... lb.	.52	–
Sodium borohydride, powd., dms., 1000-5000 lbs. works ... lb.	19.88	21.90
Sodium borohydride, stabilized water soln., 12% $NaBH_4$, 100% basis, 3000 gal. tankwagon, works. lb.	17.45	–
Sodium bromide, 99%, gran., 400-lb. dms., f.o.b. works ... lb.	1.04	–
Sodium carbonate, decahydrate, bgs, c.l., t.l., works ... ton.	264.00	–
Sodium carbonate, cryst. monohydrate (see Soda, ash)		
Sodium carbonate, monohydrated, bgs., c.l., t.l., works ... ton	392.00	–
Sodium carboxymethyl cellulose (see CMC.)		
Sodium chlorate, crystal, bulk, t.c., t.l., delivered, N.E. ... ton	330.00	–
delivered, S.E. ... ton	335.00	–
Sodium chlorate, cryst., 450-lb. dms., c.l., works. E. ... lb.	.27	–
Sodium chloride, tech. (see Salt.)		
Sodium chloride, USP, gran., bgs. . . lb.	.29	–
Sodium chlorite, tech., dms., c.l., works ... lb.	1.17	1.27
Sodium chromate, anhyd., dms., c.l., t.l., works ... lb.	.67	–
Sodium chromate, tetrahydrate, bgs., c.l., t.l., works ... lb.	.64	–
Sodium citrate, gran., anhyd., 200-lb. dms., c.l., t.l., N.Y. ... lb.	1.95	–
Sodium citrate, USP, gran., dihydrate, 100-lb. bgs., t.l., f.o.b. shipping point ... lb.	.74½	–
Sodium cyanate, dms. 1,000-lb. lots, works ... lb.	.85	–
Sodium cyanide, briquettes or gran., 99% min., 200-lb. dms, min., divd. ... lb.	.71	–
Sodium diacetate, anhyd., dms., c.l., works ... lb.	.66	–
Sodium diacetate, FCC, 50-lb. bgs., t.l., divd. E. of Rockies . . . lb.	.61	.67
Sodium diacetate, tech., 50-lb. dms., c.l., works ... lb.	.52	–
Sodium erythorbate, powd., gran., t.l. or mixed t.l., f.o.b. shipping point ... lb.	2.60	2.85
Prices W. of Denver 2c. per pound higher.		
Sodium ferrocyanide, bgs, t.l., works ... lb.	.60	–
Sodium fluoborate, tech., gran., dms., t.l., works, frt. equald. ... lb.	1.77	–
Sodium fluoride, white, 97%, 400-lb. dms., c.l., works, frt. equald.. lb.	.6345	–
100 bgs., c.l., same basis ... lb.	.60	–
USP powd., 200-lb. dms., t.l., f.o.b. shipping point ... lb.	4.69	–
Sodium formate, bgs., c.l., works . . lb.	.20	–
Sodium gluconate, tech., 50-lb. bgs., 2,500 lbs. or more frt. alld. . lb.	.60	–
Sodium hydride, oil dispersion, 60% NaH, 167-lb. dms., 10 dms., works ... lb.	1.66	–
Sodium hydrosulfide. (see Sodium sulfhydrate.)		
Sodium hydrosulfite, dms., c.l., t.l., f.o.b. shipping point E ... lb.	.64	–
Sodium hydroxide, USP, pellets, 100-lb. dms., c.l., t.l., works, frt. equald. ... lb.	.98	1.06
Sodium hydroxide, tech. (see Soda, caustic.)		
Sodium hypophosphite, EN grade, 300 lb. dms f.o.b. works ... lb.	1.425	1.50
110 lb. dms ... lb.	1.47	1.52
Sodium hyposulfite (see Sodium thiosulfate).		
Sodium iodide, USP, cryst., 300- to 500-lb. lots. dms. frt. equald. ... lb.	14.72	–
Sodium lauryl sulfate, 30%, tanks, f.o.b. works ... lb.	.29	.32
Sodium lignin sulfonate, bgs., c.l., works ... 100 lbs.	25.50	–
Sodium metabisulfite (see Sodium bisulfite).		
Sodium metaborate, octahydrate, gran., bgs., c.l., works ... lb.	.38	–
tetrahydrate, gran, bgs, c.l., works ... lb.	.49	–
Sodium, metallic, 12-lb. bricks, dms., c.l. works ... lb.	.93	–
fused, dms. 24,000-lb. lots or more, works ... lb.	.67	–
tanks, works ... lb.	.70	.80
Sodium metaphosphate, tech. bgs., c.l., f.o.b. shipping pt. frt. equald ... 100 lbs.	61.50	–
food grade, bgs. c.l. f.o.b. frt. equald. ... 100 lbs.	68.25	–
Sodium metasilicate, anhyd., bgs., c.l works ... 100 lbs.	27.25	–
bulk, c.l., works ... 100 lbs.	25.30	–
pentahydrate, bgs., c.l., f.o.b. shipping point ... 100 lbs.	18.95	–
bulk, c.l. works ... 100 lbs.	17.20	–
Sodium molybdate, anhyd., dms. f.o.b. works, 100 lbs and over. . . lb.	4.87	–
cryst., dms., t.l., same basis ... lb.	4.12	–
Sodium naphthionate, dms., c.l., t.l., f.o.b. works ... lb.	2.00	–
Sodium Nitrate, USP, bgs., c.l., f.o.b., frt. equald. ... 100 lbs.	34.50	–
Sodium nitrate, dom., industrial, bgs., c.l., works ... ton	284.00	292.00
bulk, c.l., works ... ton	250.00	–
imp., coml., 100-lb. bgs., c.l., Atl., or Gulf whse. ... ton	205.00	214.00
bulk, c.l., same basis ... ton	182.00	–
imp., agricultural, bulk, c.l., same basis ... ton	140.00	–
Sodium nitrite, USP, dms., c.l., works, frt. equald. ... 100 lbs.	37.25	–
Sodium orthosilicate, tech., anhyd., bgs., c.l., works ... 100 lbs.	34.50	–
Sodium orthosilicate, tech., hydrated, flake, dms., c.l., works. 100 lbs.	27.45	–
bgs., c.l., works ... 100 lbs.	26.25	–
Sodium oxalate, 99%, bgs., t.l., works. lb.	.45	–
Sodium pentachlorophenate, beads c.l., 30,000-lb min. ... lb.	.67	–
bgs. ... lb.	.66	–
Sodium pentobarbital (see Pentobarbital-sodium).		
Sodium perborate, tetrahydrate, tech., bgs., c.l., t.l., works ... lb.	.32½	.36½
Sodium persulfate, 225-lb. dms., 24,000 lbs. or more, f.o.b. plant ... lb.	.63½	–
55-lb. bgs. same basis ... lb.	.62	–
Sodium phenobarbital (see Phenobarbital-Sodium).		
Sodium phenosulfonate, powd., dms., lb.	.76	–
Sodium phosphate, anhyd., dibasic tech., bgs., c.l., t.l., works, frt. equald. ... 100 lbs.	54.50	–
food grade, same basis. 100 lbs.	57.50	–
Sodium phosphate, monobasic, tech., same basis ... 100 lbs.	55.75	–
food grade, same basis. 100 lbs.	59.75	–
tribasic, tech., same basis. 100 lbs.	52.25	52.75
food grade, same basis. 100 lbs.	63.25	–
chlorinated, same basis . 100 lbs.	31.50	–
cryst., tech., same basis. 100 lbs.	30.50	–
cryst., food grade, same basis ... 100 lbs.	35.50	–
USP, dried, powd., bgs., dms., works ... lb.	.19	.20½
Sodium picramate, tech., paste. 200-lb. dms., dry basis, divd. . . lb.	5.50	–
Sodium propionate, dms., 2,000 lbs. or more, f.o.b. frt. alld ... lb.	.54	–
Sodium pyrophosphate, acid, tech., bgs., c.l., works, frt. equald. . 100 lbs.	58.25	–
food grade, non-leavening, bgs., c.l., works. frt. equald. . . 100 lbs.	61.25	–
Sodium pyrophosphate, ferric, dms., c.l., t.l., works ... lb.	.3880	–
Sodium pyrophosphate, tetrabasic, anhyd., tech., bgs., c.l., t.l., works, frt. equald. . . 100 lbs.	44.75	–
bulk, hopper cars, same basis ... 100 lbs.	42.50	–
food grade, bgs., c.l., t.l., same basis ... 100 lbs.	53.00	–
Sodium salicylate, USP, cryst., 200-lb. dms., 1,000-lb. lots or more, works, frt. equald. ... lb.	3.00	–
USP, powd., 200-lb. dms., 1,000-lb. lots or more, same basis . . . lb.	3.05	–
Sodium sesquicarbonate, bulk, c.l., t.l., works ... ton.	170.00	–
bgs, c.l., t.l. works ... 100 lbs.	198.00	–
Sodium silicate, solid, or glass, 3.22-3.25 ratio, bulk, c.l., t.l., works ... 100 lbs.	15.70	–
bgs., c.l., t.l., works ... 100 lbs.	27.75	–
1.95-2.00 ratio, bulk, c.l., t.l., works ... 100 lbs.	20.30	–
bgs., c.l., t.l., works ... 100 lbs.	22.15	–
soln., 37.6° solid, 3.22-3.25 ratio, bulk, c.l., t.l., frt equald ... 100 lb.	6.30	–
"Ratio" indicates percentage by weight of SiO_2 divided by percentage by weight of Na_2O.		
Sodium silicofluoride, bgs., c.l., t.l., works, frt. equald. . . 100 lbs.	17.95	19.75
Sodium stannate, dms. wks. frt. alld. E. lb.	N.A.	–
Sodium sulfanilate, dms, works ... lb.	.22	–
Sodium sulfate, NF XII, powd., dms., 2,000-lb. lots ... lb.	.23½	–
tech., detergent, rayon-grade, c.l., works. Gulf ... ton	90.00	96.00
Sodium sulfate, West, bulk, c.l., works, frt. equald. ... ton	90.00	101.00
bulk, cl.l. East, same basis ... ton	113.00	114.00
Sodium sulfate, photo grade, 100-lb. bgs., c.l., works ... ton	47.00	53.00
Sodium sulfhydrate, flake, 70-72%, dms., c.l., works, frt. equald. ... ton	500.00	–
liq., 44-46%, tanks, works, frt. equald ... ton	500.00	–
Sodium sulfide, flake, dms., c.l., works, E., frt. equald. ... ton	470.00	–
bgs., same basis ... ton	410.00	–
Sodium sulfide, fused, dms., c.l., works, E., frt. equald. . . . ton	240.00	–
Sodium sulfite, anhyd., tech. 95-100% bgs, f.o.b. works . . . 100 lbs.	23.76	–
Sodium sulfocyanide CP (see Sodium thiocyanate).		
Sodium tetraborate (see Borax).		
Sodium tetrasulfide, liq. 34%, dms., c.l., works., frt. equald. . . ton	540.00	–
Sodium thiocyanate, purif., cryst., 250-lb. dms., 5 dms. or more f.o.b. works ... lb.	3.26	–
tech., anhyd. dms., 2,000 lbs. or more, works ... lb.	.97	–
Sodium thiosulfate, tech., photo-grade, anhyd., 100-lb. bgs., c.l., t.l., works, frt. equald. ... 100 lbs.	45.50	–
cryst. pentahydrate, c.l., t.l., same basis ... 100 lbs.	26.60	–
Sodium titanate, dms., c.l., works. . lb.	.14¼	–
Sodium trichloroacetate, 95%, 50-lb. bgs., c.l., frt. alld. E. ... lb.	.28	–
Sodium tripolyphosphate, tech., bgs., c.l., t.l., works. frt. equald. . 100 lbs.	39.75	–
bulk, hopper cars, same basis, 100 lbs.	37.50	–
food grade, bgs., c.l., t.l., same basis ... 100 lbs.	48.50	–
Sodium tungstate, tech. high moly., dms., 10,800 lbs. or more, frt. alld. ... lb.	5.00	5.50
Folin grade dms., 10,800 lbs. or more, same basis ... lb.	8.00	–
Sodium-ammonium phosphate, purif., cryst., dms., works ... lb.	.52	–
Sodium-formaldehyde sulfoxylate, dms., t.l., f.o.b. works ... lb.	.91	–
Sodium-zirconyl sulfate, dms., 1,000-lb. lots or more, works. . . . lb.	.28	–
tech., dms., any quantity, works . lb.	.16	–
Solvent naphtha, petroleum, straight aromatic, b.r. 320°-350°F, 56°F m.a.p., tanks:		
New Jersey ... gal.	1.52	–
Houston ... gal.	1.41	–
Illinois ... gal.	1.54	–
Solvent naphtha, petroleum, straight aromatic, b.r. 360°F-410°F, 60°F m.a.p., tanks:		
New Jersey ... gal.	1.30	1.35
Houston ... gal.	1.30	–
Illinois ... gal.	1.30	1.35
Sorbic acid, t.l. dms., divd. ... lb.	2.50	3.10

CHEMICAL PRICES

WEEK ENDING NOV 28, 1986

Sorbitan monostearate, dms., c.l., t.l., 30,000 lb. min., f.o.b. works ... lb.	.76	–
Sorbitan tristearate, c.l., t.l., 30,000 lb. min., f.o.b. works ... lb.	.80	–
Sorbitol, USP, reg. 70% aqueous, dms., c.l., f.o.b. shipping point ... lb.	.35	–
tanks, f.o.b. shipping point . . lb.	.30	–
gran., dms., c.l. t.l., works ... lb.	.70	.74
powd., dms., c.l., t.l., works ... lb.	.68	.72
Soybean meal (See Oils, Fats & Waxes market report.)		
Soybean oil (See Oils, Fats & Waxes market report.)		
Soybean oil acidulated, soapstock, 95% acid, tanks, New York lb.	.14	.15
Soybean oil, acid, dbl., dist., dms. . . lb.	.48	.69
tanks ... lb.	.43	.44
s.d., dms ... lb.	.47	.58
tanks ... lb.	.38	.43
Spearmint leaves, imp., bls. ... lb.	2.50	2.70
Spearmint oil, Far West, native ... lb.	9.50	–
Chinese, 60% ... lb.	5.60	–
Chinese, 80% ...	6.00	–
Far West, Scotch ... lb.	18.50	–
Spruce oil, dms ... lb.	8.00	–
St. John's bread, edible, bls. ... lb.	.29	.30
Stannic chloride, anhyd., dms., works ... lb.	N.A.	–
Stannic oxide, dms., works ... lb.	N.A.	–
Stannous chloride, anhyd., dms. wks . lb.	N.A.	–
Stannous fluoborate, liq., conc., dms., t.l., works, frt. equald. ... lb.	2.50	–
Stannous oxide, dms., works ... lb.	N.A.	–
Stannous sulfate, dms., works ... lb.	N.A.	–
Stearic acid, double pressed, bulk . lb.	.26	.39
single-pressed, bulk ... lb.	.28	.375
triple-pressed, bulk ... lb.	.32	.40
Stramonium leaves, bgs ... lb.	.15	.20
Streptomycin sulfate, USP, bulk. . kilo.	47.00	–
Strontium carbonate, glass grd., bgs., t.l., works ... lb.	.37¼	–
Strontium nitrate, 50-15 bgs., c.l., works ... 100 lbs.	51.50	–
Styrene monomer, 99.6% min., t.c., t.t., f.o.b. works ... lb.	.22	.27
Styrene-acrylonitrile resin, nat., bulk, f.o.b. plant ... lb.	.77	–
cryst., bulk, same basis ... lb.	.77	.81
clear, same basis ... lb.	.77	.81
Styrol acetate, dms. ... lb.	2.35	–
Succinic acid, purif., cryst., dms., t.l., frt. alld. ... lb.	2.00	2.10
Succinic anhydride, dms., c.l., t.l., f.o.b. work ... lb.	1.71	–
Sucrose, refd., white, bgs., c.l., f.o.b. refy. E. ... 100 lbs.	33.10	–
Sucrose acetate, isobutyrate, 90% dms., t.l., divd. ... lb.	1.18	–
tanks, divd. ... lb.	1.10	–
100%, dms., t.l., divd. ... lb.	1.18	–
Sucrose octa-acetate, denaturing grade, 100-lb. dms., f.o.b. works ... kilo	12.50	13.50
Sulfabenzamide, dms., 500 kilos . kilo.	39.50	–
Sulfabenzamide-sodium, dms, 500 kilos ... kilo.	25.00	–
Sulfacetamide, USP, dms., 500 kilos ... kilo.	20.00	23.50
Sulfadiazine, USP, powd. dms., 500 kilos ... kilo.	53.00	–
Sulfadiazine-sodium, USP, dms., 500 kilos ... kilo.	40.70	–
Sulfamerazine, USP, microcrystals, dms., 500 kilos ... kilo.	33.50	–
USP, powd., dms., 500 kilos . . . kilo.	32.00	–
Sulfamethazine-sodium, USP, powd. dms., 50 kilos ... kilo.	13.00	–
Sulfamethazine, powder, dms., 500 kilos ... kilo.	9.00	10.00
Sulfamic acid, cryst., bgs., c.l., t.l., works ... 100 lbs.	38.00	41.00
Sulfamic acid, gran., dms., c.l., t.l., works ... lb.	.38	–
Sulfanilamide, NF, reg. 1,000-lb. dms., frt. equald. ... lb.	2.00	–
Sulfanilic acid, tech., bgs., t.l., f.o.b. works ... lb.	.67½	–
Sulfaquinoxaline, veterinary, grade, dms. ... lb.	8.00	–
Sulfur, crude, bright, molten, dom., f.o.b. vessels, Gulfports ... long-ton	118.00	120.00
f.o.b. La. refy ... long-ton	120.00	122.00
recovered, divd., Houston . long-ton	120.00	122.00
ex terminal, Rotterdam ... long ton	135.00	–
f.o.b. tanks, Alberta, Canada, for US delivery ... long-ton	80.00	85.00
dark, ex-Tampa, Fla. ... long-ton	152.50	–
Sulfur, crude, 99.5% min. purity, coml. flour, 50-lb. bgs., c.l., mines basis ... 100 lbs.	13.60	–
lump, same basis ... 100 lbs.	13.60	–
Sulfur, refd., 99.5% min. purity, rolls 50-lb. bags, c.l., mines basis ... 100 lbs.	17.50	–
flour, light, 50-lb. bgs., same basis ... 100 lbs.	20.00	–
Sulfur, refd., sublimed, NF, 99.85% min. purity, 50-lb. bgs., c.l. mines basis ... 100 lbs.	28.00	–
Sulfur, rubbermakers, 99.5% min. purity, coml., reg., 50-lb. bgs., c.l., mines basis ... 100 lbs.	14.60	–
fine, 98% min. passing through 325 mesh, same basis . . 100 lbs.	15.60	–
Sulfur dichloride, dms., c.l., works, frt. equald. ... lb.	.24	–
tanks, same basis ... lb.	.17¼	–
Sulfur dioxide, liq., bulk, t.c., t.t., f.o.b. works ... ton	230.00	–
Sulfur monochloride, dms., c.l., works, frt. equald ... lb.	.22½	–
tanks, same basis ... lb.	.16¼	–

CHEMICAL PRICES

WEEK ENDING NOV 28, 1986

Sulfuric acid, virgin 100% tanks, works,		
East Coast ... ton	71.75	95.90
Gulf Coast ... ton	75.00	86.40
Midwest ... ton	80.25	–
Southeast ... ton	68.15	–
West Coast ... ton	85.00	–

NOTE: For prices on 60 and 66 Be., multiply by .7767 and .9319, respectively. For price of 20% fuming oleum, as is, add $3-$4 to above prices and multiply by 1.045.

Sulfuric acid, smelter, 100% tanks, works,		
Gulf Coast ... ton	48.00	52.00
New Mexico ... ton	20.00	25.00
Southeast ... ton	63.15	–
93%, tanks, dlvd., Northwest ton	60.00	65.00
Sunflowerseed oil, crude, f.o.b. Minneapolis ... lb.	.15½	.16
Superphosphate, triple, 46% or more, a.p.a., run-of-pile, bulk, c.l., Fla. ... unit-ton	2.75	3.05
bulk, gran., c.l., Fla. ... ton	160.00	165.00

T

Talc, dom., grd. New York bgs., c.l., works ... ton	84.00	–
99.5%, 325 mesh, bgs., c.l., works ... ton	84.00	90.00
Talc, dom, 99.5%, 400 mesh, micronized, bgs., c.l., works ... ton	187.00	238.00
625 mesh, micronized, bgs., c.l., works ... ton	200.00	–
dom., ord., Calif. grd., bgs., c.l., works ... ton	90.00	–
ord., Vermont, off-color grd., bgs., c.l. works ... ton	136.00	–
imp., Canadian, grd., bgs., c.l., works ... ton	70.00	84.00
Tall oil, crude, Southeast, tanks, works, frt equald. ... ton	90.00	100.00
Tall oil, refd., acid, same basis ... lb.	.31	–
dist., tanks, same basis ... lb.	.19	.23
Tall oil acids, 2% or more rosin, tanks, works, frt. equald. ... lb.	.20½	.23½
less than 2% rosin acid ... lb.	.22	.27
Tallow (see Oils, Fats & Waxes market report.)		
Tallow, fatty acids, tech., non-ref. dms., c.l., dlvd ... lb.	.37	.40
tanks, dlvd. ... lb.	.29	.45
hydrogenated, tech., flake, bgs., c.l., dlvd ... lb.	.37	.33
tanks, dlvd. ... lb.	.35	.42
Tangerine oil, Fla., dms. f.o.b. ... lb.	8.50	9.60
Italian, dms. ... kilo	52.90	–
Tankage, animal feeding, 9-11%, NH_3, New York, bulk ... unit-ton	5.50	–
Tankage, fert. grade (see Nitrogenous process tankage).		
Tannic acid, NF, fluffy, bbls., 1,000-lb. lots ... lb.	6.09	–
tech., powd., dms. ... lb.	4.62	–
Tar acid oil, 15-18% t.l., dms., f.o.b works ... gal.	1.40	–
25-28%, t.l., dms., f.o.b. works ... gal.	1.59	–
50-53%, t.l., dms., f.o.b. works ... gal.	1.87	–
Tartaric acid, NF, bgs. ... lb.	1.20	1.50
Tellurium, metallurgical, f.o.b. works lb.	12.00	–
Terpin hydrate, NF, imp., cryst., powd., 36 kilo drums, f.o.b. ship. pt., frt. equald. ... lb.	1.35	–
Terpineol ... lb.	1.10	1.50
Terpinyl acetate, extra, dms ... lb.	2.40	–
prime, dms. ... lb.	1.35	2.05
Terpinyl propionate, dms ... lb.	4.50	–
Tetrachloroethylene, tech. (see Perchloroethylene).		
Tetrachloroethylene, USP, dms., c.l., t.l., works. ... lb.	.30¼	–
Tetraethyl orthosilicate, bulk, f.o.b. works ... lb.	1.53	1.66
Tetraethylene glycol, tanks, frt. alld. lb.	.67	–
Tetraethylene glycol diacrylate, t.l. dms., f.o.b. works ... lb.	1.50	–
Tetraethylenepentamine, tanks, same basis ... lb.	1.70	1.75
Tetraethylthiuram disulfide, tech., flake, dms., t.l., frt. alld. ... lb.	.68	2.07
Tetrahydrofuran dms., c.l., t.l., f.o.b works ... lb.	1.02	–
tanks, same basis ... lb.	.96	–
Tetrahydrofurfuryl alcohol tanks, f.o.b. Memphis, Tenn. ... lb.	.90	–
Tetrahydrolinalool, syn., dms. ... lb.	7.20	–
Tetrahydrophthalic anhydride dms., c.l., t.l. f.o.b. works ... lb.	.65	–
Tetrapotassium phosphate (see Potassium phosphate, tetrabasic).		
Tetrasodium pyrophosphate (see Sodium pyrophosphate, tetrabasic.)		
Thallium metal, dlvd. ... lb.	35.00	–
Thallium sulfate, 99%, bots., dlvd. kilo	140.00	–
Theobromine, bulk f.o.b. works ... kilo	140.00	150.00
Theophylline, USP, anhyd. 50-kilo dms., 10,000-kilo lots ... kilo	12.00	12.95
Thiamine hydrochloride, USP 100-kilo dms, dlvd. ... kilo.	33.00	–
Thiamine mononitrate, USP, 100-kilo., dms, dlvd. ... kilo.	33.00	–
Thiodiphenol, 98%, dms., f.o.b. works ... lb.	3.35	–
Thioflavin green toners, molybdated, PMA, dms. ... lb.	5.40	6.05
tungstated, PTA, dms. ... lb.	5.60	5.85
Thioglycolic acid, refd., dms., ton lots 100% acid basis ... lb.	2.07	–
Thioindigoid maroon, dms., frt. alld. lb.	7.50	–
reds, dms., frt. alld. ... lb.	5.88	6.12
Thionyl chloride, high-purity, 99.6%, 24,000-lb. min. t.l., dms. frt. equald. ... lb.	.55	–
Thorium nitrate, purif., dms., 100-lb. lots or more, works ... lb.	2.75	–
dl-Threonine, dms 10 kilos wks ... kilo.	128.00	–
Thyme leaves, French, bgs. ... lb.	1.45	–
Spanish, bgs ... lb.	.75	–
Thyme oil, NF, red, dms. ... kilo	20.00	–
NF, white, dms ... kilo	22.00	–
Thymol, NF ... lb.	3.75	6.15
Thymol iodide, dms., 100-lbs. f.o.b. works ... lb.	52.30	56.20
Tin metal (NY composite) ... lb.	N.A.	–
Titanium dioxide, anatase, bgs., 20-ton lots, frt. alld. ... lb.	.77	.79
slurry shipments, 50-ton lots, dry basis, frt. alld. ... lb.	.78	–
Titanium dioxide, rutile, reg., bgs., 20-ton lots, frt. alld. ... lb.	.81	.84
slurry shipments, 50 ton lots, dry basis, frt. alld. ... lb.	.84	–
Non-chalking rutile material costs 1c. per pound more.		
Titanium hydride powd. electronics grade, dms. ... lb.	26.50	–
Titanium tetrachloride, tech., bulk, c.l., f.o.b. works ... lb.	.30	.35
200-gal cylinders c.l., same basis lb.	.50	–
Titanium sponge, 99.3%, fiber drums, less than 5,000 lbs. f.o.b. wks. ... lb.	4.85	–
Tobias acid, 2,000 lbs. or more ... lb.	2.45	–
d-a-Tocopherols, 67%, dms. ... kilo	50.08	–
d-a-Tocopheryl acetate, 81% conc., dms. ... kilo	57.49	–
d-a-Tocopheryl acid succinate, cryst., dms. ... kilo	78.44	–
dl-a-Tocopherol, dms. ... kilo.	27.40	–
dl-a-Tocopheryl acetate, USP 50-kilo dm. 1000 kilo min. ... kilo.	16.00	18.50
50% dry powd., 50-kilo dm. ... kilo	17.00	–
Tolu balsam, cns. ... lb.	7.60	8.68
Toluene, petroleum, ind. or nitration, tanks		
Atlanta, Ga., dlvd. ... gal.	.70	–
Bayonne, N.J., dlvd. ... gal.	.70	–
Baytown, Tex., f.o.b. ... gal.	.70	–
Chicago, Ill. dlvd. ... gal.	.70	–
Clairton, Pa., f.o.b. ... gal.	.70	–
Deer Park, Tex., f.o.b. ... gal.	.70	–
Ft. Wayne, Ind., dlvd. ... gal.	.70	–
Gulf Coast, spot, barges ... gal.	.70	–
Houston, Tex., dlvd. ... gal.	.70	–
New Jersey Metro, dlvd ... gal.	.70	–
Philadelphia, Pa., dlvd. ... gal.	.70	–
Providence, R.I., dlvd. ... gal.	.70	–
Toluene di-isocyanate (mixed isomers), 80%, 2,4- and 20% 2,6-isomers, jumbo tankcars, dlvd. ... lb.	1.01	–
p-Toluenesulfonamide, powd., dms., t.l., works ... lb.	3.55	–
m-Toluidine, tech., bulk ... lb.	3.10	–
o-Toluidine, tech., liq., dms. c.l. ... lb.	.72	.75
bulk, same basis ... lb.	.60	.64
p-Toluidine, tech. cast solid, dms., cl., works ... lb.	1.80	1.85
Liq., tanks, same basis ... lb.	1.70	–
flake, same basis ... lb.	1.95	–
Toluidines, mixed, o-m-p, tech., liquid, c.l. f.o.b. works ... lb.	1.03	–
bulk same basis ... lb.	.95	–
Tolyltriazole, dms., 1,000-lb. lots, f.o.b. Cincinnati, Ohio ... lb.	2.90	–
Tonka beans, Angostura, prime, 1,000-lb. lots ... lb.	6.50	–
Toxaphene, dms., c.l., t.l., works ... lb.	.38	–
Tragacanth gum, No. 1, ribbons, cns. lb.	36.00	40.00
flaked powder ... lb.	12.50	15.00
Triacetin tanks, dlvd. E ... lb.	.75	–
Tributyl citrate, t.l., drums, f.o.b., works ... lb.	1.70	–
Tributyl phosphate, tanks, works ... lb.	1.65	1.77
Tributylamine, dms., c.l., dlvd. ... lb.	1.39	–
tanks, same basis ... lb.	1.33	–
Trichloroacetic acid, tech., 300-lb. dms., c.l., f.o.b., works ... lb.	.94	–
USP, 100-lb. dms., frt. equald. ... lb.	.99½	–
1,2,4-Trichlorobenzene, pure, tanks, dlvd. ... lb.	.61½	–
1,1,1-Trichloroethane, tanks, consumers, dlvd ... lb.	.40½	
1,1,2-Trichloroethane, tanks, f.o.b. works ... lb.	.42	–
Trichloroethylene, tanks, dlvd. ... lb.	.38½	–
Trichloroisocyanuric acid, dms. ... lb.	1.25	–
Trichlorophenoxyacetic acid (see 2,4,5-T).		
Tricholine citrate, 65%, soln., non-ret. dms., 1,500-lb. lots, dlvd. ... lb.	1.35	–
Tricresyl phosphate, tanks, f.o.b. works ... lb.	1.60	1.76
Tridecyl alcohol, mixed isomers, tanks, dlvd. ... lb.	.57	–
Triethanolamine, 85%, tanks, dlvd. E. ... lb.	.35	.37
99%, tanks, same basis ... lb.	.35	.37
Triethanolamine lauryl sulfate, tanks, f.o.b. works ... lb.	.27¼	.27½
Triethylamine, dms., c.l., dlvd. ... lb.	1.33	–
tanks, same basis ... lb.	1.20	–
Triethyl citrate, t.l., drums, f.o.b., works ... lb.	1.82	–
Triethyl phosphate, tanks, dlvd. ... lb.	1.15	–
Triethylene glycol, tanks, f.o.b. Gulf lb.	.47	–
Triethylene glycol dipelargonate, tanks f.o.b. works ... lb.	.29½	–
40-60% tanks, 100% basis, frt. equald. ... lb.	.35	–
Triethylenetetramine tanks, frt. equald. lb.	1.43	1.45
Tri-iso-tolyl trimellitate, f.o.b. works lb.	.51	.55
Tri-isobutylene, tanks, dlvd. ... lb.	.45	–
Tri-isopropanolamine, dms., c.l., frt. alld. E. ... lb.	.57½	–
Trimethylamine, anhyd., tanks, frt. equald., 100% ... lb.	.54½	–
25% soln., tanks, frt. equald., 100% basis ... lb.	.63½	–
40% soln., tanks, frt. equald., 100% basis ... lb.	.56½	.57
Trimethylolpropane bgs c.l. t.l. dlvd. lb.	.73	–
Trimethylolpropane triacrylate, t.l. dms., f.o.b. works ... lb.	1.50	–
Tripentaerythritol, tanks, frt. alld., E. lb.	1.00	–
Triphenyl phosphate, dms., t.l., frt. equald. ... lb.	1.64	.78
Tripropylene glycol tanks, frt. alld. E. ... lb.	.64	–
Tris-(hydromethyl) nitromethane, solid, t.l. works ... lb.	.605	–
Trisodium phosphate (see Sodium phosphate, tribasic)		
l-Tryptophan, dms, 25-kilo lots ... kilo	62.00	65.00
Tung oil, tanks, imp. New York ... lb.	.31	.33
Tungstic acid 92½%, dms., 1,750-6,000 lbs., works ... lb.	12.85	–
Turmeric, Alleppey 5% ... lb.	.66	–
Turmeric, Alleppey over 6% ... lb.	.69	–
Turpentine, crude sulfate tanks, f.o.b. Southeast works ... gal.	.70	.80

U

Ultramarine blue pigments, 550-2,000 lb.-lots, works ... lb.	1.30	–
violet, same basis ... lb.	2.20	–
Umber pigment, burnt, American, frt. equald. ... lb.	.13½	.15½
raw, American, dom., bgs., l.c.l., same basis ... lb.	.13½	.14¾
Undecylenic acid, dms., works ... lb.	2.70	–
Urea, 46% N, ind., bulk, Gulf Coast, 50-ton c.l. ... ton	200.00	–
46% N, agricultural, barges, f.o.b. Gulf Coast, granular ... ton	75.00	80.00
46% N, agricultural, f.o.b. Midwest terminals, granular ... ton	100.00	–
Uva-Ursi leaves, bls. ... lb.	.22	–

V

Valerian root, Belgian, bgs. ... lb.	.65	.85
Indian, bgs. ... lb.	.45	–
Vanadium oxytrichloride, 3,000 lb. cyls., works ... lb.	5.40	–
Vanadium pentoxide, tech., gran., per lb. of V_2O_5, 550-lb. dms., works. ... lb.	4.10	4.94
fused or flake, per lb. V_2O_5, 550-lb. dms., works ... lb.	3.35	3.65
Vandyke brown, bags., t.l., frt. equald. lb.	.27¼	–
Vanilla beans, Madagascar ... lb.	37.00	–
Java, tins ... lb.	27.00	30.00
Vanillin, USP, dms., f.o.b works ... lb.	6.25	–
Imp., dms. ... lb.	4.75	5.00
Veratrol Ag ... lb.	.64	–
Vetiveryl acetate, dms. ... kilo	60.50	–
extra ... lb.	63.00	–
Vetiver oil, Bourbon, dms. ... lb.	49.00	–
Chinese ... lb.	18.00	–
Haitian ... lb.	26.50	–
Java ... kilo	34.00	–
Victoria blue toners, molybdated, PMA dms. ... lb.	6.20	6.30
tungstated, PTA, dms. ... lb.	10.40	–
Vinyl acetate monomer, tanks, dlvd. lb.	.39	–
Vinyl chloride monomer, polymer grade, tanks, f.o.b. works ... lb.	.28	–
Vinyl ether, USP, anesthesia, 75-cc. bots., hospitals ... bots.	1.56	–
2-Vinylpyridine t.l., dms. works. ... kilo.	7.81	–
tanks, works ... kilo.	7.61	–
Vinyltoluene, bulk, f.o.b. ... lb.	.67	.73½
Vitamin A, synthetic, dry, pharm., 500,000 A units per gm., 50-kilo. lots ... kilo	33.00	–
Vitamin A, liq. in oil, pharm., 1,000,000 A units per gram, 10 kilo lots ... kilo	41.00	–
Vitamin A, feed grade, 650,000 units per gm. ... kilo.	18.70	23.85
Vitamin B_1 (see Thiamine hydrochloride).		
Vitamin B_{12} (see Riboflavin and Yeast).		
Vitamin B_{12}, cryst., non-sterile, USP (cyanocobalamin), vials, 50-gram, lots ... gram	8.00	9.75
Vitamin B_{12}, 1% trituration of cryst. B_{12} (cyanocobalamin USP) with dicalcium phosphate, 25-kilo dms. kilo.	10.75	12.75
Vitamin B_{12}, 0.1% trituration of cryst. B_{12} (cyanocobalamin USP) with mannitol, 25-kilo. dms. ... kilo.	15.80	–
Vitamin B_{12}, cobalamin concentrate NF with mannitol. 1,000 mcg, per gram, dms, ... per gram activity	19.45	–
Vitamin B_{12}, 1% Vitamin B_{12}, USP, absorbed on resin, 5-kilo dms., 500-gram lots, frt. alld. per gram activity	15.65	–
Vitamin B_{12}, 1% cobalamin concentrate, NF, absorbed on resin, 5-kilo dms., frt. alld. per gram activity..	15.40	–
Vitamin B_{12}, 1% cyanocobalamin in gelatin, 2.5-kilo dms., frt. alld. ... per gram activity	15.40	–
Vitamin C (see Ascorbic acid).		
Vitamin D (see Cholecalciferol)		
Vitamin D_2 (see Codliver and Fishliver oils).		
Vitamin E (see a-Tocopherol and Wheat germ oil).		
Vitamin H (see Biotin).		
Violet methyl toner (see Methyl violet toner)		

W

Warfarin 0.5%, dms., ton lots, frt. alld. New York or Chicago. ... lb.	.75	–
Wheat germ oil, cold-pressed, ... gal.	16.50	17.50
cold-processed ... gal.	14.00	–
White precipitate, USP, powd., 100-lb. dms., f.o.b. works ... lb.	7.892	11.24
Whiting (see Calcium carbonate).		
Wintergreen oil, syn. (see Methyl salicylate).		
Witch hazel bark, bls. ... lb.	1.35	–
leaves, bls. ... lb.	1.75	–
400 mesh, bgs., c.l. works ... ton	134.00	–
325 mesh, bgs., c.l. works ... ton	117.00	–
high aspect ratio, bgs., works ton	164.00	–
Wollastonite, t.l., f.o.b., producing plant, general grade ... ton	200.00	–
325 mesh ... ton	140.00	141.00
400 mesh ... ton	160.00	–
1250 mesh ... ton	500.00	–
Wool grease, USP (see Lanolin).		
Wormseed oil (see Chenopodium oil, NF)		
Wormwood oil, cns. ... lb.	31.00	–

X

Xanthan gum, food 300-lb. dms., f.o.b. works ... lb.	5.66	6.20
ind., grade, same basis ... lb.	4.54	–
Xylene, petroleum, ind. or nitration, tanks		
Alliance, La., f.o.b. ... gal.	.76½	–
Atlanta, Ga., dlvd. ... gal.	.76½	–
Bayonne, N.J., dlvd. ... gal.	.76½	–
Bayonne, N.J. f.o.b. ... gal.	.76½	–
Baytown, Tex., f.o.b. ... gal.	.76½	–
Chicago, Ill., dlvd. ... gal.	.76½	–
Clairton, Pa. ... gal.	.76½	–
Ft. Wayne, Ind., dlvd. ... gal.	.76½	–
Gulf Coast, spot, barges ... gal.	.76½	–
Houston, Tex., dlvd. ... gal.	.76½	.80
New Jersey Metro, dlvd ... gal.	.76½	–
Xylene, petroleum, ind. or nitration, tanks		
Philadelphia, Pa., dlvd. ... gal.	1.38	–
Providence, R.I., dlvd. ... gal.	1.42	–
South Bend, Ind., dlvd. ... gal.	1.37	–
m-Xylene, high purity, tanks, f.o.b. Texas City, Tex. ... lb.	.38	–
o-Xylene, tanks, works ... lb.	.125	.145
p-Xylene, tanks, dlvd. ... lb.	.19	–
m-Xylenediamine, dms., t.l., f.o.b. works ... lb.	1.70	–
2,4-Xylidine, tech., liq., c.l., t.l. f.o.b. works ... lb.	1.50	–
Xylidines, mixed, o-m-p., dms., c.l., t.l., f.o.b. works ... lb.	1.00	–

Y

Yara yara, 25-lb. cns. ... lb.	2.81	–
Yeast, pure brewer's debittered, NF, Saccharomyces, t.l., f.o.b. works ... lb.	1.10	–
Yerba, santa leaves, bls. ... lb.	2.40	–
extra, bots. ... lb.	26.50	31.75
Ylang-ylang oil, extra grade ... lb.	36.50	–
grade 1 ... lb.	25.00	–
grade 2 ... lb.	26.00	–
grade 3 ... lb.	22.00	–

Z

Zein, bgs., 2,000-lb. lots ... lb.	7.50	9.30
Zinc acetate, NF, dms. ... lb.	1.00	1.78
tech., dihydrate, bgs., t.l., works. lb.	1.50	–
Zinc borate, tech., 43% ZnO, 37% B_2O_3, 50-lb. bgs., 20,000-lb. t.l., f.o.b. works ... lb.	.55	–
cryst., 37% ZnO, 49% B_2O_3, 250-lb. dms. 20,000 lbs. t.l. f.o.b. wks. lb.	.89	–
Zinc chloride, USP, gran., dms. ... kilo	9.79	–
Zinc chloride, tech., soln. 50%, tanks, f.o.b. Cleveland, Ohio ... 100 lbs.	20.20	–
Concord, N.C. ... 100 lbs.	20.20	–
Freeport, Tex. ... 100 lbs.	20.20	–
Old Bridge, N.J. ... 100 lbs.	20.20	–
65 degree, same basis Cleveland, Ohio ... 100 lbs.	27.90	–
Concord, N.C. ... 100 lbs.	27.90	–
Old Bridge, N.J. ... 100 lbs.	27.90	–
70 degree, same basis Cleveland, Ohio ... 100 lbs.	29.70	–
Concord, NC ... 100 lbs.	29.70	–
Old Bridge, NJ ... 100 lbs.	29.70	–
72 degree, same basis Cleveland, Ohio ... 100 lbs.	33.20	–
Concord, NC ... 100 lbs.	33.20	–
Old Bridge, NJ ... 100 lbs.	33.20	–
Zinc chromate, bgs., dlvd. ... lb.	1.12	–
Zinc cyanide, dms., c.l. ... lb.	1.65	2.14
Zinc dust pigment type 1 & 2, dms., c.l., f.o.b. plant ... lb.	.59	.67
Zinc ethylenediamine tetracetic acid, 8.4% Zn., ammonia salt soln., t.c., t.t., f.o.b. works ... lb.	.56	–
9% Zn., ammonia salt soln., t.c., t.t., f.o.b. works ... lb.	.46	–
Zinc fluoborate, liq. conc., dms., t.l., works, frt. equald. ... lb.	.66	–
Zinc metal, high grade, dlvd. ... lb.	.47	.50
Zinc naphthenate, liq. 8% Zn, dms., dlvd ... lb.	.95	–
Zinc nitrate, tech., flake 300-lb. dms. ... lb.	.34	.36
Zinc oxide photo conductive, bgs., c.l., frt. alld. ... lb.	.50	.60
Zinc oxide, USP 50-lb. bxs., c.l., frt. alld. ... lb.	.59	.65
Zinc oxide pigment, American process, lead-free bgs., c.l., frt. alld. ... lb.	.57	.59
Zinc oxide pigment, French process regular, bgs., c.l., frt. alld. ... lb.	.55	.56¼
Zinc phenolsulfonate, purif., gran., 250-lb. dms., t.l., frt. alld. ... lb.	1.82	–
Zinc pyridinethione, 48% dispersion, dms., f.o.b. works ... lb.	8.50	8.80
Industrial grade	14.50	–
Zinc resinate precip. 7.2-7.8% Zn, dms., frt. alld. ... lb.	.45	–
Zinc silicofluoride, dms., c.l., t.l., works ... lb.	.17	.20
Zinc stearate, USP, bulk, t.l. ... lb.	.92	1.06
Zinc sulfate, gran., monohydrate, industrial grade 36% Zn., bgs., c.l., works ... 100 lbs.	30.00	32.00
agricultural grade powd., bulk, same basis ... 100 lbs.	26.50	–
Zinc yellow (see Zinc chromate).		
Zinc-ammonium chloride, bgs., c.l., works ... lb.	.42	–
Zinc undecylenate, dms., works. ... lb.	4.67	4.70
Zinc-formaldehyde sulfoxylate, basic 200-lb. dms., frt. alld. ... lb.	1.05	–
Zircon gran. bgs., bulk c.l., works. ton	165.00	177.00
Zircon milled bgs., 200 and 325 mesh, c.l., works ... ton	225.00	–
Zirconium acetate soln., 25% ZrO_2, dms., c.l., 30,000 lbs. min., works ... lb.	.97	–
22% ZrO_2, same basis ... lb.	.78	–
Zirconium hydride, powd., electronic grade, dms., works ... lb.	.31	.75
Zirconium oxide, powd., coml., dms., 2,000 lbs. min. ... lb.	4.25	–
electronic, same basis ... lb.	7.25	–
insulating, stabilized, 325°F same basis ... lb.	3.31	3.82
insulating, unstabilized, 325°F same basis ... lb.	3.65	3.75
dense, stabilized, 30F, same basis ... lb.	2.82	–
Zirconium oxychloride, liq., ctns. 5-ton lots, works ... lb.	.91	1.04

CHEMICAL IMPORTS

US imports of chemicals and related materials are reported in this section by CPI material. Listings include consignee where possible, container, net weight, name of vessel (in parenthesis), port of origin and date of shipment's arrival in New York or the Port of Newark.

US chemical imports/exports are tabulated monthly in the market reports.

A-B

ACETAMINOPHEN Zephyr Container Line 850 ctn (37478 lbs) (Zhuang He) Hong Kong, 10/19.
ACETYL CHLORIDE TCL Container Service 57 dms (28274 lbs) (California Star) Rotterdam, 10/25.
ACID BLUE Delal 20 dms (1301 lbs) (American Oklahoma) Khor Fakkan, 10/29.
ACID CASEIN American Dry Casein 690 bgs (38623 lbs) (Sea Land Express) Rotterdam, 10/24.
ACID VIOLET Cargo Link Air Freight 10 dms (1230 lbs) (Hoegh Mary) Bombay, 10/24.
ALUMINUM OXIDE Lonza 828 bgs (41579 lbs) (Italica) Genoa, 10/24.
Treibacher 19 bbg (39138 lbs) (Dart Atlantica) Bremerhaven, 10/30.
96 dms (40040 lbs) (Dart Atlantica) Bremerhaven, 10/30.
Norton 1780 bgs (197201 lbs) (Dusseldorf Express) Hamburg, 10/29.
Polycom Huntsman 369 dms (43918 lbs) (Aldebaran) Bremen, 11/4.
ALUMINUM SULFATE Amsea Sea & Air Service 20 sks (40780 lbs) (Ever Gentle) Felixstowe, 10/27.
AMMONIUM BIFLUORIDE Browning Chemical 880 bgs (45591 lbs) (Ever Gifted) Hamburg, 10/15.
AMMONIUM SULFAMATE A & S 770 bgs (39264 lbs) (Zhuang He) Kobe, 10/19.
AMMONIUM SULFATE I M Rodgers 30 dms (3485 lbs) (Zeus) Rio D Janeiro, 10/24.
AMORPHOUS GRAPHITE Asbury Graphite Mills 2450 bgs (271382 lbs) (Neptune Garnet) Hong Kong, 10/23
ANGELICA ROOT Max Van Pels 46 bgs (3243 lbs) (Hoegh Mary) Calcutta, 10/24.
ANIMAL FLUE Velleman 800 bgs (80247 lbs) (Savannah) Santos, 11/1.
ANNATTO SEED 640 bgs (70829 lbs) (Bacol Vitoria) Santos, 10/24.
Chr Hansens Laboratory 1 con (40058 lbs) (Santa Fe) Callao, 11/3.
Cr bank 2 con (52417 lbs) (Santa Fe) Callao, 11/3.
HW Robinson 265 bgs (17760 lbs) (Minerva) Salvador, 10/30.
Torna Trdg 360 bgs (40000 lbs) (Santa Fe) Callao, 11/3
ANTIMONY ALLOY Leyden Customs Expediters 720 pcs (45093 lbs) (Imperial) Antofagasta, 10/31.
ANTIMONY TRIOXIDE ACI Chemicals 800 bgs (44092 lbs) (Zhuang He) Hong Kong, 10/19.
Helm New York Chemical 1600 bgs (92593 lbs) (Zhuang He) Hong Kong, 10/19.
ICD Group 680 bgs (37928 lbs) (Zhuang He) Hong Kong, 10/19.
BALL CLAY Hammill & Gillespie 800 sks (45064 lbs) (Ever Gentle) Felixstowe, 10/27.
BALSAM PERU Belmay 5 dms (2736 lbs) (Saint Louis) Haina, 10/18.
BARIUM CARBONATE Cometals 2720 bgs (151712 ls) (American Oklahoma) Hong Kong, 10/29.
BARIUM CHLORIDE C Withington 2040 bgs (115584 lbs) (American Oklahoma) Kobe, 10/29.
Cometals 1360 bgs (75866 lbs) (American Oklahoma) Kobe, 10/29.
BARIUM HYDROXIDE Ore & Chemical 700 bgs (39700 lbs) (Kazimierz Pulaski) Rotterdam, 11/4.
United Mineral & Chemical 340 bgs (37853 lbs) (Zhuang He) Hong Kong, 10/19.
BEESWAX Machado 100 bgs (13228 lbs) (San Pedro) Haina, 10/24.
BENZOGUANAMIDE James E Fox 881 bgs (44438 lbs) (Ever Gentle) Hamburg, 10/27.
BENZONITRILE Nissho Iwai American 1 dms (492 lbs) (Oriental Freedom) Kobe, 10/28.
BENZYL ALCOHOL Hatco Chemical 1 tnk (41446 lbs) (Aldebaran) Antwerp, 11/4.
CDF Chimie 1 tnk (41711 lbs) (Aldebaran) Antwerp, 11/4.
CDF Chimie 80 dms (40036 lbs) (Kazimierz Pulaski) LeHavre, 11/4.
BENZYL CYANIDE Inter Maritime Fwdg 1 tnk (42659 lbs) (Ever Gentle) Antwerp, 10/27.
BETA NAPHTHOL Daniel F Young 800 bgs (34392 lbs) (California Star) Bremen, 10/25.
BETA PINENE E L Scott 10 dms (4475 lbs) (Italica) Lisbon, 10/24.
BISHEXAMETHYLENE TRIAMINE 1 tnk (41976 lbs) (Aldebaran) Antwerp, 11/4.
BISMUTH Redix Group Intl 462 cs (44092 lbs) (American Oklahoma) Hong Kong, 10/29.
BITTER ORANGE OIL Citrus & Allied Essences 4 dms (1660 lbs) (Zeus) Santos, 10/24.
Ungerer 2 dms (840 lbs) (Zeus) Santos, 10/24.
BLANC FIXE Ore & Chemical 700 bgs (39700 lbs) (Ever Gentle) Antwerp, 10/27.
BORIC ACID Enichem Americas 2160 bgs (219049 lbs) (Italica) Leghorn, 10/24.

C-D

CADMIUM PIGMENT Whittaker Clark & Daniels 31 dms (0 lbs) (American Lynx) Felixstowe, 10/30.
CADMIUM Minor Metals 20 cs (47212 lbs) (Aldebaran) Antwerp, 11/4.
Rasy Intl 648 cs (41618 lbs) (Santa Fe) Callao, 11/3.
CAFFEINE D Hauser 100 dms (11998 lbs) (Elvira Oria) Rotterdam, 10/24.
150 dms (24263 lbs) (Bakkafoss) Rotterdam, 10/25.
Deutsche Sinochem 200 dms (13007 lbs) (Zhuang He) Kobe, 10/19.
CALCINED MAGNESITE Smith Chemical 300 bgs (30027 lbs) (Aldebaran) Antwerp, 11/4.
CALCIUM CHLORIDE Davos Chemical 4 plt (8907 lbs) (Stefan Starzynski) Bremerhaven, 10/28.
CALCIUM HYPOCHLORITE ICD Group 360 dms (39683 lbs) (Oriental Freedom) Yokohama, 10/28.
CARNAUBA WAX J W Hanson 440 bgs (44484 lbs) (Zeus) Fortaleza, 10/24.
CARBAZOLE DIOXAZINE Sumitrans 160 dms (21252 lbs) (Ever Grand) Osaka, 10/27.
CARBON MONOXIDE A Burghart Shpg 87 cyl (15708 lbs) (Dusseldorf Express) Bremerhaven, 10/29.
CARDAMON OIL 1 ctn (143 lbs) (Saint Louis) Haina, 10/18.
CARNAUBA WAX Robert S Baldini 800 bgs (44974 lbs) (Bislig Bay) Fortaleza, 10/17.
Frank B Ross 440 bgs (44484 lbs) (Zeus) Fortaleza, 10/24.
Astor Wax 400 bgs (22185 lbs) (Zeus) Fortaleza, 10/24.
CASHEW NUT SHELL LIQUID Cardolite 1 bks (440920 ls) (Rio Cincel) Fortaleza, 10/24.
Colloids Chemicals 1 bks (870817 lbs) (Rio Cincel) Fortaleza, 10/24.
Schenectady Chemicals 1 bks (440920 lbs) (Rio Cincel) Fortaleza, 10/24.
CASSIA KORINTJI Gel Spice 250 bgs (33841 lbs) (Hoegh Mary) Padang, 10/24.
458 bgs (78171 lbs) (Hoegh Mary) Padang, 10/24.
DMT 303 bgs (33737 lbs) (Hoegh Mary) Padang, 10/24.
CASSIA OIL Citrus & Allied Essences 12 dms (5900 lbs) (American Oklahoma) Hong Kong, 10/29.
CASSIA VERA Gel Spice 125 ctn (11850 lbs) (Hoegh Mary) Padang, 10/24.
Morris J Golombeck 275 bls (33910 lbs) (Hoegh Mary) Padang, 10/24.
Morris J Golombeck 110 ctn (16898 lbs) (Hoegh Mary) Padang, 10/24.
William E Martin 77 ctn (5798 lbs) (Hoegh Mary) Padang, 10/24.
CASTOR OIL 1 bks (661380 lbs) (Minerva) Salvador, 10/30.
Latina Trdg 1 bks (925932 lbs) (Zeus) Fortaleza, 10/24.
1 bks (661380 lbs) (Zeus) Santos, 10/24.
CAUSTIC POTASH Contichem 1 bks (8912181 lbs) (Stolt Emerald) Antwerp, 11/4.
1 bks (1984158 lbs) (Stolt Emerald) Antwerp, 11/4
800 bgs (45732 lbs) (Elvira Oria) Rotterdam, 10/24.
CAUSTIC SODA 1 bks (9706942 lbs) (Rich Arrow) Beancour, 10/21.
CHINA CLAY Hammill & Gillespie 800 sks (44533 lbs) (Ever Gifted) Felixstowe, 10/15
CHLORPROMAZINE CHLORHYDRATE Rhone Poulenc 60 pkg (3757 lbs) (Atlantic Saga) LeHavre, 10/29.
CHROMIC ACID Alpha Intl 350 dms (40510 lbs) (Italica) Genoa, 10/24.
CINNAMON LEAF OIL 10 dms (4857 lbs) (Hoegh Mary) Colombo, 10/24.
CINNAMON QUILLS William Bernstein 300 bls (30410 lbs) (Hoegh Mary) Colombo, 10/24.
CITRIC ACID A J Murray 396 bgs (39600 lbs) (Kalidas) Genoa, 10/29.
CITRONELLA OIL 80 dms (35697 lbs) (Zhuang He) Hong Kong, 10/19.
80 dms (34515 lbs) (Ever Grand) Singapore, 10/27.
CLOVE LEAF OIL 160 dms (78296 lbs) (Ever Grand) Singapore, 10/27.
CLOVE STEMS Max Van Pels 167 bgs (11118 lbs) (Hoegh Mary) Colombo, 10/24.
CLOVES Prudent Trdg 100 bgs (11089 lbs) (Savannah) Santos, 11/1.
COALTAR INTERMEDIATES Montedison 350 ctn (42359 lbs) (Italica) Genoa, 10/24.
334 dms (64211 lbs) (Italica) Genoa, 10/24.
COBALT IRON Trans National Shpg 8 cs (9046 lbs) (Neptune Garnet) Yokohama, 10/23.
COBALT NICKEL Unimodal 12 dms (1235 lbs) (Dart Atlantica) Felixstowe, 10/30.
COCONUT ESTER 1 bks (440924 lbs) (Stolt Emerald) Rotterdam, 11/4.
COCONUT OIL 3 bks (2799867 lbs) (Stolt Emerald) Legaspi, 11/4.
1 bks (2204091 lbs) (Stolt Emerdal) Manila, 11/4.
CORIANDER CGM French Line 1960 bgs (198415 lbs) (Atlantic Cartier) LeHavre, 10/30.
Transit Trdg 360 bgs (39683 lbs) (Atlantic Cartier) LeHavre, 10/30.
Transit Trdg 360 bgs (47906 lbs) (American Ohio) Felixstowe, 10/25.
CREAM OF TARTAR Pearson Intl Transport 30 bgs (0 lbs) (Sea Land Pacer) Algeciras, 10/30.
CREOSOTE HMS Malabar 2 cs (494 lbs) (Atlantic Cartier) Liverpool, 10/30.
CUMIN SEED Indian Groceries & Spices 100 bgs (11354 lbs) (Hoegh Mary) Bombay, 10/24.
CYANURIC CHLORIDE Lonza 320 dms (40071 lbs) (Dusseldorf Express) Bremerhaven, 10/29.
CYCLOHEXYLAMINE 1 tnk (39881 lbs) (Dusseldorf Express) Greenock, 10/29.
DEXTRINE 800 bgs (44445 lbs) (Sea Land Express) Rotterdam, 10/24.
800 bgs (44633 lbs) (Ever Gentle) Antwerp, 10/27.
DEXTROSE MONOHYDRATE Roquette 418 bgs (42123 lbs) (Atlantic Saga) LeHavre, 10/29.
DIBUTYLAMINE 2 tnk (73678 lbs) (California Star) Rotterdam, 10/25.
DICHLOROANTHRAQUINONE Leyden Customs Expediters 90 dms (13452 lbs) (Hoegh Mary) Bombay, 10/24.
DICHLOROBENZENE Mobay Chemical 240 dms (42170 lbs) (Dusseldorf Express) Rotterdam, 10/29.
DICYANDIAMIDE H P Lambert 810 bgs (40767 lbs) (Ever Gifted) Hamburg, 10/15.
James E Fox 810 bgs (40770 lbs) (Ever Gifted) Hamburg, 10/15.
DIETHYL OXALATE 38 dms (17566 lbs) (Atlantic Cartier) Liverpool, 10/30.
38 dms (17566 lbs) (Atlantic Cartier) Liverpool, 10/30.
DIMETHYL AMINOPROPYLAMINE 2 tnk (80380 lbs) (California Star) Rotterdam, 10/25.
DIMETHYLANILINE 1 tnk (37831 lbs) (Dusseldorf Express) Antwerp, 10/29.
DIMETHYLETHYLAMINE 124 dms (42509 lbs) (Ever Spring) Fos, 10/30.
DIMETHYLSULFOXIDE 1 bks (42946 lbs) (Ever Spring) Fos, 10/30.
DIPENTAERYTHRITOL Sumitrans 600 bgs (35979 lbs) (Ever Grand) Tokyo, 10/27.
DIPHENYL OXIDE Bartell Shpg 35 dms (6146 lbs) (American Oklahoma) Kobe, 10/29.
Leyden Customs Expediters 200 dms (12566 lbs) (Zhuang He) Kobe, 10/19.
20 dms (9833 lbs) (Zhuang He) Kobe, 10/19.
Leyden Customs Expediters 200 dms (13228 lbs) (Zhuang He) Kobe, 10/19.
Livingston Intl Freight 120 dms (7672 lbs) (Zhuang He) Kobe, 10/19.
Saratoga Fwdg 80 dms (39154 lbs) (Zhuang He) Kobe, 10/19.
DIRECT BLUE 86 Jecasa 100 dms (12150 lbs) (Hoegh Mary) Bombay, 10/24.
DISODIUM PHOSPHATE Silvey Shpg 401 mix (41352 lbs) (Ever Gentle) Antwerp, 10/27.
DYE INTERMEDIATE 14 pkg (2870 lbs) (Dusseldorf Express) Greenock, 10/29.
Leyden Customs Expediters 118 kgs (29123 lbs) (Bakkafoss) Rotterdam, 10/24.
Leyden Customs Expediters 118 kgs (29123 lbs) (Bakkafoss) Rotterdam, 10/25.
DYESTUFFS Daniel F Young 66 dms (14810 lbs) (Atlantic Cartier) Liverpool, 10/30.
Livingston Intl Freight 80 dms (5220 lbs) (Zhuang He) Kobe, 10/19.
85 dms (5626 lbs) (Atlantic Cartier) Liverpool, 10/30.
Organic Dyestuffs 20 dms (2429 lbs) (Oriental Freedom) Kaohsiung, 10/28.
F X Coughlin 10 dms (1257 lbs) (Dart Atlantica) Felixstowe, 10/30.
Livingston Intl Freight 40 dms (5000 lbs) (Ever Grand) Hong Kong, 10/27.

E-G

ENZYMES Atlantic Container Line 201 pcs (35274 lbs) (Dusseldorf Express) Bremerhaven, 10/29.
Novo Laboratories 20 bbg (36156 lbs) (Sea Land Express) Bremerhaven, 10/24.
72 dms (40446 lbs) (Sea Land Express) Bremerhaven, 10/24.
EPOXY RESIN Perry Chemical 72 dms (39334 lbs) (Ever Grand) Keelung, 10/27.
EPSOM SALTS Potash Import & Chemical 400 bgs (41323 lbs) (Dusseldorf Express) Bremerhaven, 10/29.
Qualchem 2400 bgs (242118 lbs) (Ever Gifted) Hamburg, 10/15.
2400 bgs (242118 lbs) (Ever Gentle) Hamburg, 10/27.
ETHYL HEXANOYL CHLORIDE SNPE 40 dms (0 lbs) (Independence) Marseille, 10/20.
ETHYL SODIUM OXALACETATE America Cynamid 466 dms (34048 lbs) (Ever Gifted) LeHavre, 10/15.
ETHYL VANILLIN F X Coughlin 20 dms (2205 lbs) (Dart Atlantica) Felixstowe, 10/30.
ETHYLENE OXIDE E Miltenberg 6 cyl (481 lbs) (Rio Cincel) Montevideo, 10/24.
EUCALYPTUS OIL American Import Service 3 dms (1310 lbs) (American Lynx) Rotterdam, 10/30.
FATTY ACID Frank B Ross 857 bgs (43323 lbs) (Ever Gifted) Antwerp, 10/15.
Linden Warehouse 740 bgs (42935 lbs) (Ever Gifted) Antwerp, 10/15
FATTY ALCOHOL Heemsoth Kerner 520 bgs (26482 lbs) (Elvira Oria) Rotterdam, 10/24
FENNEL SEED Indian Groceries & Spices 100 bgs (11354 lbs) (Hoegh Mary) Bombay, 10/24.
FENUGREEK CGM French Line 120 bgs (0 lbs) (Atlantic Cartier) Le Havre, 10/30.
400 pkg (44092 lbs) (Atlantic Cartier) Le Havre, 10/30
FISH OIL Containership Agency 20 dms (43872 lbs) (Aldebaran) Bremen, 11/4
FLUORINATED RUBBER Montedison 27 dms (1360 lbs) (Italica) Genoa, 10/24.
FLUOROBORIC ACID Kali Chemie 1 con (35318 lbs) (Ever Gifted) Hamburg, 10/15.
Leschaco 1 tnk (37037 lbs) (Atlantic Saga) Bremerhaven, 10/29.
FORMALDEHYDE RESIN Donex 36 plt (48255 lbs) (Sea Land Pacer) Algeciras, 10/30.
GELATIN Corbett Intl 27 dms (6340 lbs) (Independence) Marseille, 10/20.
108 dms (24888 lbs) (Ever Spring) Fos, 10/30.
Davis Delatine 680 bgs (36078 lbs) (Arturo Gomez J) Cartagena, 10/27.
O C Lugo 60 dms (14160 lbs) (California Star) Felixstowe, 10/25.
GLYCERINE ACI Chemical 70 mds (41821 lbs) (Ever Grand) Singapore, 10/27.
Henkel 1 bks (1102620 lbs) (Stolt Emerald) Rotterdam, 11/4.
Magna Kron 1 tnk (43783 lbs) (Zeus) Santos, 10/24.
GLYOXYLIC ACID 136 dms (82805 lbs) (Stefan Starzynski) LeHavre, 10/28.
GRAPHITE Asbury Graphite Mills 2380 bgs (114026 lbs) (Zhuang He) Kobe, 10/19.
4590 pcs (227905 lbs) (Zhuang He) Kobe, 10/19.
720 bgs (79630 lbs) (Dusseldorf Express) LeHavre, 10/29.
720 bgs (81524 lbs) (Kalidas) Algeciras, 10/29.
Cometals 4080 bgs (227568 lbs) (Zhuang He) Kobe, 10/19.
Howard Enton Graphite Road 1360 bgs (75856 lbs) (Zhuang He) Kobe, 10/19.
Leyden Customs Expediters 200 dms (11243 lbs) (Zhuang He) Kobe, 10/19.
198 pcs (36186 lbs) (Independence) Marseille, 10/20.
GUAIACOL Rhone Poulenc 25 dms (11971 lbs) (Independence) Marseille, 10/20.
GUAR GUM Tic Gums 780 bgs (38686 lbs) (Hoegh Mary) Bombay, 10/24.
GUM TURPENTINE PDM 80 dms (34215 lbs) (Bislig Bay) Sao Fran Do, 10/17.

H-K

H ACID Ciba Geigy 157 dms (37381 lbs) (Dusseldorf Express) Hamburg, 10/29.
HEXADIENE Biddle Sawyer 1 dms (370 lbs) (Dusseldorf Express) Rotterdam, 10/29.
HEXANE, POLYMER GRADE Ashland Chemical 1 bks (716654 lbs) (Golar Petrosun) Rotterdam, 11/1.
HEXYLENE GLYCOL B P Chemical Americas 1 tnk (44665 lbs) (Aldebaran) Felixstowe, 11/4.
B P Oil 1 tnk (44467 lbs) (California Star) Felixstowe, 10/25.
ICO Ind 1 tnk (41601 lbs) (Savannah) Santos, 11/1.
HIDE GLUE Brockton Adhesives 500 bgs (40124 lbs) (Savannah) Santos, 11/1.
Taub & Carmel 960 bgs (89842 lbs) (Zeus) Santos, 10/24.
HYDROCARBON RESIN Keystone Chemical 680 bgs (37778 lbs) (Savannah) Santos, 11/1.
HYDROFLUORIC ACID A M Sea & Air Service 66 dms (39686 lbs) (Ever Gifted) Felixstowe, 10/15.
New Wave Transport 144 dms (77780 lbs) (Zim Haifa) Osaka, 10/26.
HYDROGEN PEROXIDE Degussa 77 col (39804 lbs) (Atlantic Cartier) Antwerp, 10/30.
HYDROXYBENZOIC ACID Mersant Intl 480 bgs (26984 lbs) (Zhuang He) Kobe, 10/19.
Ueno Fine Chemical Ind 480 bgs (26984 lbs) (Zhuang He) Kobe, 10/19.
IRON OXIDE Orgo Thermit 103 pkg (116290 lbs) (Ever Gentle) Antwerp, 10/27.
IRON SULFATE George Uhe 160 pkg (41568 lbs) (Ever Gifted) Hamburg, 10/5.
ISODECANOL 1 bks (1430373 lbs) (Golar Petrosun) Middlesbroug, 11/1.
ISOPROPYL TITANATE Kay Fries 1 tnk (37743 lbs) (Aldebaran) Antwerp, 11/4.
KARAYA GUM Meer 225 bgs (40675 lbs) (Hoegh Mary) Bombay, 10/24.

L-N

L-EPHIDRINE HCL Georgopulo 40 dms (2910 lbs) (American Ohio) Rotterdam, 10/25.
LACTIC ACID G F Expeditors 70 dms (35494 lbs) (Bacol Vitoria) Rio D Janeiro, 10/24.
LACTIC CASEIN Adamba Imports Intl 1200 bgs (132276 lbs) (Kazimierz Pulaski) Bremerhaven, 11/4.
LEAD NITRATE Ariel Maritime Group 6 plt (10287 lbs) (Dusseldorf Express) Antwerp, 10/29.
Nu Tech Chemical Ind 360 dms (48060 lbs) (Bakkafoss) Rotterdam, 10/25.
LEMONGRASS OIL Ungerer 6 dms (2668 lbs) (American Oklahoma) Singapore, 10/29.
LEMON OIL 1 dms (35 lbs) (Bislig Bay) Rio D Janeiro, 10/17.
6 dms (2659 lbs) (Italica) Genoa, 10/24.
60 dms (22339 lbs) (Polwind) Vera Cruz, 10/24.
LIME OIL 5 dms (2279 lbs) (San Pedro) Haina, 10/24.
LIMONENE Firmenich 40 dms (16446 lbs) (Savannah) Santos, 11/1.
LITHOPONE Ore & Chemical 700 bgs (39701 lbs) (Sea Land Express Rotterdam, 10/24.
1500 bgs (79401 lbs) (Stefan Starzynski) Rotterdam, 10/28.
Transcontinental Transport S 5 dms (2304 lbs) (Elvira Oria) Reykjavik, 10/24.
MACE OIL Bartel Shpg 10 dms (4433 lbs) (Ever Grand) Singapore, 10/27.
20 dms (8862 lbs) (Ever Grand) Singapore, 10/27.
MAGNESIUM CHLORIDE Smith Chemical 100 bgs (11023 lbs) (Aldebaran) Antwerp, 11/4.
MAGNESIUM OXIDE Magnesium Elektron 720 bgs (39683 lbs) (Aldebaran) Antwerp, 11/4.
MALEIC ANHYDRIDE American Import Service 2 bxs (99 lbs) (American Ohio) Rotterdam, 10/25.
Miljac 720 bgs (40128 lbs) (Stefan Starzynski) Rotterdam, 10/28.
Huels 720 bgs (40128 lbs) (Kazimierz Pulaski) Bremerhaven, 11/4
MALONONITRILE Lonza 8 dms (3968 lbs) (Dusseldorf Express) Bremerhaven, 10/29.
MENTHOL CRYSTALS Irving R Boody 189 pkg (21546 lbs) (Neptune Garnet) Kobe, 10/23.
MENTHOL CRYSTALS American Shpg 100 dms (11021 lbs) (American North Ca) Paranagua, 10/30.
American Import Service 40 dms (2801 lbs) (American Lynx) Rotterdam, 10/30
Sarco 40 dms (4396 lbs) (Savannah) Santos, 11/1.
METHYL 12-HYDROXYSTEARATE 1 bks (39070 lbs) (American North Ca) Santos, 10/30
METHYL ETHYL KETOXIME Bodox 76 dms (33426 lbs) (Ever Gentle) Antwerp, 10/27.
METHYL ISOBUTYL KETONE 1 bks (1097901 lbs) (Stolt Topaz) Kobe, 11/3.
METHYL GULCAMINE Rhone Poulenc 560 dms (34568 lbs) (Atlantic Saga) LeHavre, 10/29.
MICROCRYSTALLINE WAX Inter Maritime Fwdg 5600 pkg (248167 lbs) (Bislig Bay) Santos, 10/17.
MINERAL WAX Strohmeyer & Arpe 2205 bgs (224351 lbs) (Ever Gifted) Hamburg, 10/15
MONOPENTAERYTHRITOL Recochem 700 bgs (39930 lbs0 (Imperial) Valparaiso, 10/31.
MONOCHLORACETIC ACID Obeco Chemical 135 dms (42262 lbs) (Ever Gifted) Antwerp, 10/15.
MONOSODIUM GLUTAMATE Ajinomoto 2140 mix (192814 lbs) (Bacol Vitoria) Santos, 10/24.
MUSK, XYLOL 200 dms (23986 lbs) (American Oklahoma) Kobe, 10/29.
MYRISTIC ACID Scan Shpg 882 bgs (46693 lbs) (Stefan Starzynski) Bremerhaven, 10/28.
NICKEL CHLORIDE Le Nickel 800 bgs (41226 lbs) (Aldebaran) Antwerp, 11/4
NICKEL SULFATE 225 bgs (20536 lbs) (Dart Atlantica) Bremerhaven, 10/30.
NICOTINAMIDE Reilly Tar & Chemical 800 bgs (44621 lbs) (Dusseldorf Express) Antwerp, 10/29.
Reilly Tar & Chemical 20 bgs (40437 lbs) (Dusseldorf Express) Antwerp, 10/29.
Dye Specialties 60 dms (7308 lbs) (Hoegh Mary) Calcutta, 10/24.
NITROCELLULOSE PIGMENT Dan Transport 295 mix (21905 lbs) (Kazimierz Pulaski) Bremerhaven, 11/4.
NUTMEGS AOT 260 bgs (28660 lbs) (California Star) Rotterdam, 10/25.
Leyden Customs Expediters 520 bgs (57320 lbs) (Bakkafoss) Rotterdam, 10/25.
740 bgs (58078 lbs) (California Star) Rotterdam, 10/25.

O-P

OLIVE OIL American Ital Foods 750 ctn (39352 lbs) (Italica) Cadiz, 10/24.
Berio Imports 25836 cs (646415 lbs) (Italica) Leghorn, 10/24.
Copley Distr 50 cs (1213 lbs) (Sea Land Express) Rotterdam, 10/24.
Donerex Intl 1951 ctn (42359 lbs) (Ever Spring) Genoa, 10/30.
Intertraffic 1 cs (0 lbs) (Sea Land Express) Rotterdam, 10/24.
Macys 210 ctn (1058 lbs) (Independence) Marseille, 10/20.
Parthenon Intl Packers 4 cs (309 lbs) (American Ohio) Rotterdam, 10/25.
Richter Brothers 1321 pkg (39048 lbs) (Independence) Marseille, 10/20.
Bertolli 12885 ctn (194527 lbs) (Italica) Leghorn, 10/24.
Goya Foods 2116 cs (47060 lbs) (Sea Land Pacer) Algeciras, 10/30.
ORANGE OIL Kuehne & Nagel 28 dms (11023 lbs0 (California Star) Rotterdam, 10/28.
125 dms (62636 lbs) (Minerva) Santos, 10/30.
Citrus & Allied Essences 80 dms (31570 lbs) (Bacol Vitoria) Santos, 10/24.
George Uhe 80 dms (35274 lbs) (American North Ca) Santos, 10/30.
116 dms (52029 lbs) (American North Ca) Santos, 10/30.
OREGANO CGM French Line 550 0pkg (24251 lbs) (Atlantic Cartier) LeHavre, 10/30.
Herbert Mamorek & Sons 1100 bgs (17747 lbs) (American Ohio) Felixstowe, 10/25.

Continued on Page 53

UPE UNIVERSAL PROCESS EQUIPMENT, INC.

MAILING ADDRESS: BOX 338, ROOSEVELT, NEW JERSEY 08555
PLANT SITE IS: SOUTH ROBBINSVILLE, NEW JERSEY 08691 609-443-4545 TELEX 833021
WE WANT TO BUY YOUR SURPLUS USED EQUIPMENT/PROCESSES/PLANTS

OVER 15,000 PIECES OF PROCESS EQUIPMENT IN STOCK...CALL TODAY!

LATEST ADDITIONS
SOUTHWESTERN LIQUIDATION
VESSELS–PRESSURE–316SS

GAL.	PSI	GAL.	PSI
14,000	30	5,800	30
13,000	60	5,600	69
11,000	30	3,400	30
7,000	30	3,200	103
6,400	50	900	352

OTHERS FROM 50 TO 1,000 GAL.

TANKS-316SS
36,000, 18,500, 13,500 (2), 12,000, & 6,600 GAL.
MANY FROM 100 TO 5,000 GAL.

HEAT EXCHANGERS–316SS
19,000, 9,600, 7,200, 3,560, 2,480, 1,035, 853, 705, 617, 614, 471, 350, 182, 125 SQ. FT.
5000 sq. ft. Monel

HEAT EXCHANGERS-TITANIUM
23,770, 18,000, 16,996, 14,400, 14,252, 8,987, 2,170, 1,470, 1,140, 300, 200, SQ. FT.

REACTORS–316SS
5,100 GAL., 350 PSI AGIT., 3,170 GAL. 359 PSI AGIT. (4)
CENTRIFUGAL PUMPS – 5 TO 100 HP 316SS (40)
HEATER–15MM BTU/HR THERMAL PRODUCTS GAS FIRED SKID MNTD. (2)
COMPRESSORS–1,240 CFM @ 110 PSI 250 HP (2)
220 CFM @ 215 PSI 150 HP (2)
AIR FIN COOLERS TO 80,440 SQ. FT. (6)
ALUMINUM BINS & SILOS TO 3,500 CU.FT.
COLUMNS–316SS–132"X110'X43 TRAY, 90"X35'X10 TRAY16"X33' PACKED 30 PSI (2)

I/RAND, XLE AIR COMPRESSORS: 20½ x12½ x 8½, 100 PSI 300 HP & 16 x 16 x 7, 45 psi 200 HP
KEMP INERT GAS GENERATOR MDL. DCV 75 L 70000 SCFH

2 INDUSTRIAL SITES–AVAILABLE IMMEDIATELY
Niagara Falls/New York Area
700,000 Sq. Ft. Buildings...50 acres of land
750,000 Sq. Ft. Buildings...35 acres of land
Plants manufactured Carbon Electrodes
Equipment Highlights:
5 Model 5057 Raymond Hi-Side Roller Mills in operation til Sept. 1986
40 Hi-intensity CS jkt. mixers similar to Littleford's.
Electrical sub stations and switch gear
Dust Collectors and Material Handling Systems
Carbon Extrusion Extruders: 57", 40", 30" & 22"
84" Lathe...New in 1974.
14000 Ton United Hydraulic downstroke forging & forming press
Complete vertical Autoclave System...13' dia. x 26'4", 347 SS, 150 psi & 0.1 MM vac. & @ 700°F
Complete in plant railroad...flat cars/hopper cars/locomotive
UPE WILL SELL/RENT/LEASE COMPLETE FACILITIES OR SELL EQUIPMENT PIECEMEAL
CONTACT: RON GALE FOR DETAILS 609-443-4545

ALABAMA CHEMICAL PLANT
(3) 290 cu. ft. 316 SS rotary vac dryer systems
10'x 14' Elmco rotary vac filter
(2) Niagara 30 H 190 filters SS
NASH model H9 vac pump w/fuller V 300 booster
Reactors: (4) 3300 gal. 316 SS 60/30 HP agit w/coils 100 psi
(1) 3300 gal. 316 SS 30 HP, 6TW, 300psi coils
(2) 2000 gal. 316 L SS, 75/200 psi jkt
Tanks: 15000 gal. 316 L SS agit.
5500, gal. (3) 3000, 2200 gal. Monel vertical
4000 gal. G/L Pfaudler Chemstor 30 psi
SS Heat Exchangers from 100 to 500 sq. ft.
plus many misc. items.

TWO LARGE LIQUIDATIONS
48"x24" TOLHURST SS "BATCHMATIC" CENTRIFUGE (6) COMPLETE ... LATE MODEL
18" DIA. SS BAKER PERKINS TERMEER PUSHER CENTRIFUGE
60"x40' JEFFREY SS CONTINUOUS FLUID BED DRYER (2)
60"x20' JEFFREY SS FLUID BED DRYER
6'6x40' FULLER CS ROTARY DRYER, 50 HP
6'6x32' CS COUNTER-CURRENT ROTARY DRYER
ST REGIS 3-STATION BAGGER MDL. 10-VC-3
54" DIA. DUCON 304SS SCRUBBER TYPE L
- - - - -
3-95 CU. FT. DAY SANITARY SS RIBBON BLENDERS, 15 HP
1-43 CU. FT. DAY SANITARY SS RIBBON BLENDER
1-8'x12'SS, K-S PRECOAT ROTARY VACUUM FILTER
1-1'x3' K-S PRECOAT ROTARY VACUUM FILTER ... COMPLETE WITH ALL ACCESSORIES
1-7' DIA. BOWEN SPRAY DRYER ... COMPLETE WITH ALL ACCESSORIES

WE WANT TO BUY YOUR SURPLUS EQUIPMENT, PROCESSES, UNITS AND COMPLETE PLANTS. WE HAVE OUR OWN DISMANTLING CREWS

COMPLETE DRY TONER PLANT/POWDERED COATING PLANT
Complete Lines: Fine Grinding
Drying
Compounding
Packaging
Molding

★ UNUSED 7' Bowen Spray Dryer Complete with all accessories and structural steel
WE WILL SELL COMPLETE LINES. CALL FOR DETAILS

VACUUM DRYERS
325 cu .ft. Abbe, 304 SS dbl. cone
200 cu .ft. 316SS, 6'6"x11'6", rotary
164 cu .ft. Paterson "Conaform," 316SS Dbl. cone
150 cu. ft. SS 304 SS Twin Shell
150 cu .ft. SS, & 150 cu.ft. Nickel clad
125 cu .ft. SS & CS, 4'x14', 105/90/150 psi
125 & 83 cu. ft. Buflovak SS Rotary
90, 70, 60, 50, 30, cu. ft. PK SS & G/L dbl cone
70 cu. ft. KS Titanium dbl. cone
40, & 15 cu.ft. Stokes, SS rotary

WE HAVE OVER 700 SS TANKS IN STOCK

GLASS * GLASS * GLASS REACTORS
5,000 GAL. DEDIETRICH 100FV/90 REGLASSED
4,000 GAL. DEDIETRICH 100/90 PSI
3,000 GAL. DEDIETRICH, 100/90, PHILA. DRIVE
3,000 GAL. RA SERIES, 100/90 TW, REGLASSED(2)
2,000 GAL. RA SERIES, 100/90 TW, REGLASSED
1,000 GAL. RA SERIES, 100/90 TW, REGLASSED
1,000 GAL. E SERIES 25/90 (4)
750 GAL. 25/90 TW, (2)
500 GAL. RA SERIES, 100/90, TW
400 GAL. E, SERIES, 25/90, TW
300 GAL. E, SERIES, 25/90, TW
200 GAL. E, SERIES, 25/90 REGLASSED, TW
100 GAL. E, SERIES, 25/90, TW
OVER 100 GLASS LINED REACTORS IN STOCK

GLASS LINED TANKS
FROM 5-22,000 GALLONS
TRAILER LOADS OF GLASS LINED PARTS AVAILABLE
• LOU FALCONE–OUR G/L SPECIALIST WITH 21 YRS. EXPERIENCE IS HERE TO HELP YOU! •

STAINLESS STEEL REACTORS
20,000 GAL. 304SS, 40 & FV
9,000 GAL. 304 SS, 50/5 PSI
8,500 GAL. INCONEL, 40/60 PSI AGIT.
6,000 GAL. 304SS, 100/15 PSI
4,200 GAL. 316 ELC, 50FV/50 PSI
3,000 GAL. 316 ELC, 75 FV/160 PSI
2,800 GAL. 304LSS, 25FV/100 PSI
2,500 GAL. 316 SS 1,000/100PSI (2)
1,300 GAL. 316SS, 150FV/125 PSI
1,000 GAL. 316ELC 100FV/90 PSI
800 GAL. 316SS, 140FV/50 PSI (3)
750 GAL. 316 ELC, 180FV/140 PSI
500 GAL. INCONEL, 60 FV/50 PSI
400 GAL. HAST C., 210 FV/160 PSI

CALL NOW ABOUT GIANT RHODE ISLAND & NEW JERSEY LIQUIDATION MOST EQUIPMENT STILL INSTALLED
(89) Glass lined & SS Reactor systems complete with condenser, receivers and control panels. from 50 gal. to 4000 gal.
(30) Filter Presses polypro & SS from 18" to 56" plate/ frame & recessed plates.
(25) Vacuum dryer systems complete with condensers, vacuum pumps and receivers.
Double Cone: glass & SS.
Rotary Vacuum Dryers 316 SS
Vacuum Shelf Dryers SS and Heresite lined.
(18) Centrifuges 316 SS automatic basket centrifuges complete with controls and nitrogen purge
Scrubber systems/Vacuum filter systems/Glass lined and SS tank farms.
MUCH MORE ! ! !
30,000 Gal. 1974 Propane Tank 250 PSI
10,000 Gal. 347 SS Tanks (3)

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GOOD, USED, CHEMICAL, PHARMACEUTICAL & RELATED EQUIPMENT – CENTRIFUGES, DRYERS, FILTERS, REACTORS, TANKS ETC.
WE WILL PURCHASE INDIVIDUAL ITEMS OR COMPLETE PLANTS.
CALL OUR OFFICE TODAY. TOP DOLLARS PAID. NO DEAL TOO BIG OR TOO SMALL.

DRYERS
Drum Dryers/Flakers
(1) 24" dia. x 36" Buflovac SS dble. drum dryer
(2) 32" dia.x 108" Blaw Knox CI dble. drum dryer
(1) 32" dia. x 17'6" Sandvik SS belt flaker
(1) 36" dia.x 10' Buflovak CI dble. drum dryer
(3) 42" dia.x120" Blaw Knox CI dble. drum dryer
(1) 48" dia.x 28" drum flaker, chrome plated drum
(1) 48" dia.x 40" CI flaker, mfg. by Buffalo Foundary
(1) 48" dia.x 40 drum flaker, nickel plated drum, mfg. Blaw-Knox

Fluid Bed
(1) 60 Kg. Aeromatic, Batch, 6'x9', 56,000
(1) 100 Kg. Aeromatic Model ST 100, sanitary SS
(1) Fitzpatrick Model FA 250, SS, 20 HP XP

Holoflite
(1) Western Precipitation Model P80SSO-A, twin screw, 12" dia. x 20' long, SS constr., jckt. rated 15 psi, complete with 7.5 HP vari-speed drive.
(1) New/Never-Used Joy Processor, CS, single screw, 16"x16' long, rated 110 psi @ 340° F., sprocket & chain drive by 1.5 HP varispeed drive.

Rotary Vacuum
(1) 200 Cu. Ft. Stokes, SS constr., compl.
(2) 165 Cu. Ft. Pfaudler, Double Cone, G/L, 30 &FV/50 psi jktd., 15 HP vari-drive
(1) 150 Cu. Ft. Blaw Knox, Nickel
(1) 132 Cu. Ft. Stokes, Nickel
(1) 72 Cu. Ft. Blaw Knox, SS
(1) 60 Cu. Ft. Titanium Double Cone
(1) 50 Cu. Ft. Gemco, 316SS sanitary, double cone
(1) 37.8 Sq. Ft. Horiz. Thin Film, vac. int. & 150 psig, 304/316SS
(1) 37 Cu. Ft. Gemco, SS
(1) 30 Cu. Ft. P-K Twin Shell, 304SS
(1) 20 Cu. Ft. Abbe Twin Cone, 304SS

Spray
(1) 30"x3' Bowen Laboratory w/3' cone bottom, SS constr., w/centrifugal atomizer, 3 HP blower & motor.(1)
(1) Niro lab size 32"diax2'w/2'cone w/centrif. atomizer SS contacts
(1) 18' dia. Bowen compl. system SS contacts, new 1976

CENTRIFUGES
(1) Delaval BRPX 309, SS, 20HP
(1) Unused Model B-10 Podbielniak, Alloy 20
(1) Sharples AS-26, SS
(2) Sharples AS-16P, 316SS
(1) Alfa-Laval SS Decanter, Horiz., Mdl. NX314
(2) Dorr Oliver Mdl. CH30 CSU "Merco," 316SS contacts, 150 HP
(1) Baker Perkins S-32 "Pusher Type," SS, 50 HP
(1) Bird 18" x 28", 316 ELC, contour bowl.
(2) Bird 24"x38", 316SS, 40 HP
(1) Sharples P-3000, 316SS, 30 HP
(1) Sharples P-1000, SS 20HP
(1) Unused Bird 36 x98, 317L SS
40"x 20" Tolhurst centrifuge, Kynar lined, perf. basket
(1) Tolhurst 48" x 24" perf. basket, 316SS sanitary, auto. plow & discharge, rated 85 #/cu. ft. @ 900 RPM, 20 HP XP.
(1) Tolhurst 48" x 24" Batchmaster, 316SS, perf. basket, w/hydr. plow & 20 HP hydr. drive
(1) Tolhurst 48"x24" Batchmaster, rubber lined, perf. basket, w/hydr. plow & 20HP hydr. drive
(2) Tolhurst 48" x 24" Batchmaster, Heresite lined, perf. basket, w/hydr. plow & 20 HP hydr. drive
(1) Western states 48"x 24", 316 SS
(1) Fletcher 48"x 28" Suspended type, SS perf. basket, 20/10 HP
(1) Sharples Tornado 48" x 30", 316SS, perf. basket, 40 HP XP
(1) Alfa Laval Model MAPX 210 T24, SS wetted parts
(2) Sharples C-27, 316 SS, wetted parts, 40 HP
(1) Sharples C-20, Super-D-Hydrator, SS, 30 HP
(1) Dorr Oliver Mercone Screener Model C-400 X2, all SS, twin screw disch., 10 HP
PARTIAL LISTING ONLY

$AVE $AVE IDM $AVE $AVE

LIQUIDATION OF 160MM #/YR. SODIUM TRIPOLYPHOSPHATE PLANT–KEARNY, NEW JERSEY
1–8' dia. x 50' Bartlett Snow Rotary Dryer, SS, 100 HP.
1–8' dia. x 50' Louisville Steamtube Rotary Dryer, SS clad, 40 HP.
1–11'6" x 70' lg. Bartlett Snow Calciner, 316SS, 1100°C., complete.
1–11'6" dia. C.E. Raymond Separator, single whizzer, CS constr.
1–24,000 Gal. Mix Tank, SS constr., 16' dia. x 16', 20 HP.
1–20,000 Gal. Storage Tank, SS constr., 16" dia. x 14'.
2–10,000 Gal. Storage Tank w/-jckt., SS constr., atmos. int., 150 psi jckt.
1–10,000 Gal. Mix Tank, SS constr., 13' dia. x 10', 30HP.
1–10,000 Gal. Mix Tank w/int. coils, 13' dia. x 10', 30 HP.
1–Marley NC Tower, 88"W. x 14'6" L. x 9'H.
1–1130 sq. ft. Micro-Pul Reverse Jet Dust Collector, CS constr.
*Large Quantity Silos. Many Screw Conveyors Available–various sizes, CS & SS construction.

BUY DIRECT FROM PLANT SITE AND SAVE!!!
CALL FOR COMPLETE DETAILS.

EVAPORATORS
(1) 1 Sq. Ft. Artisian "Konlro" Ajust-O-Film sys., 316SS
(1) 1.4 Sq. Ft. Luwa Wiped Film, 316SS, 1.5 HP
(1) 1.4 sq. Ft. Luwa thin film SS
(1) 2.5 Sq. Ft. Rodney Hunt Turbo Film 347 SS
(1) 5.4 sq. Ft. Luwa filmtruder, 316 LSS
(1) 6.54 Sq. Ft. Votator Evaporator System, 316 SS contacts, 15 psi & FV & int., 150 psi jkt.
(1) 8.7 Sq. Ft. Rodney Hunt Turbo-Film, 304 SS contact parts, 15 psi & FV/150 psi jckt.
(1) 10.8 Sq. Ft. Luwa SS Wiped Film Evap. System, 15/550 psi
(1) 19.5 Sq. Ft. Votator Turba-Film, 304 Sanit. SS FV/150 psi 10HP
(1) 20 Sq. Ft. Kontro Horiz. Adjust-O-Film, 316ELC, 50 psig, 15 HP
(1) Approx 31 Sq. ft. Vert., Turbo-Film Processor, 304 SS Contacts
(1) Like New 37.8 Sq. Ft. Luwa Horiz. Thin-Film Dryer, 304/316L SS
(1) 40 Sq. Ft. Konlro Adjust-O-Film, SS constr., 20 HP
(1) 47 Sq. Ft. Artisan rising Film, Hast. "C"
(1) Approx 51 sq. ft. Pfaudler Wiped film, 316 SS, 100/85 & FV
(1) 80 Sq. Ft. Konlro Wiped Film Syst., SS constr., FV/150 psi, 40 HP
(1) UNUSED 85 sq. ft. Luwa thin film dryer horiz. 316 L wetted parts, FV int., 150 psi sat steam jkt.
(1) 141 Sq. Ft. Rodney Hunt Turbo-Film, 316 SS 15 psi int., 35 psi jkt 40 HP XP

BLENDERS
800 Cu. Ft. Jktd. Dbl.Rbn., CS
Approx. 480 Cu. Ft. CS, 75HP
UNUSED 460 Cu. Ft. Marion Paddle, CS, 75 HP
400 Cu. Ft. J. H. Day Dbl. Ribbon Carbon Steel Contr. 40 HP (1)
300 Cu. Ft. CS Dbl. Cone 30 HP
200 Cu. Ft. KS 316SS Dbl. Cone
175 Cu. Ft. P-K Twin Shell, 316SS
150 Cu. Ft. J. H. Day Dbl. Ribbon Carbon Steel Contr. 25 HP (2)
89.3 Cu. Ft. CS Dbl. Cone, 7.5 HP
63 Cu. Ft. Marion Paddle, CS
60 Cu. Ft. 304 SS P-K, Twin Shell, w/int. bar
60 Cu. Ft. Gemco Dbl. Cone, 304SS
40 Cu. Ft. Gemco Twin Shell, SS Sant. Finish
37 Cu. Ft. Gemco SS
30 Cu. Ft. P-K, 304 SS, W/lig. bar.
20 Cu. Ft. P-K, Twin shell, SS
16 Cu. Ft. Robinson Dbl. Rbn. CS
15 Cu. Ft. WC Marion SS
10 Cu. Ft. Gemco dbl. cone, CS, 1½HP
10 Cu. Ft. P-K Sanit Twin Shell 1½HP
10 Cu. Ft. Howes, CS, Dbl. Rbn.
5 Cu. Ft. SS, Dbl. Cone W/liquid-solids bar
10" P-K zig zag

FILTERS
Pressure Leaf
1–562 Sq. Ft., 316ELC, Hercules, 28 leaves
1–512 Sq. Ft., 316SS, Niagara, 21 leaves
1–400 Sq. Ft. R/L Sparkler
1–327 Sq. Ft., 304SS, Ind. Filter, 11 leaves
1–320 Sq. Ft. Durco 316 SS, 11 Leaves
1–259 Sq. Ft. Pronto Mdl. #3259, 75 psig
1–200 Sq. Ft., SS, Hercules, Horiz.
1–191 Sq. Ft. Enzinger, SS, Vert., 75 psi
1 – 157.64 sq. Ft. Sparkler model 56-5-28, 316SS
1–150 Sq. Ft. Horiz., 12 Vert. Leaf 316SS
1–135 Sq. Ft. Ni, Bowser, Vert.
1–35 Sq. Ft. Hercules Model 5, 316 SS, horiz. tank vert leaves 50 psi
1-Sparkler Mdl.#18 D 12, SS const.
1-Sparkler Mdl.#18 D 4, constr.
1-Sparkler Mdl.#33S 28, constr.

Rotary Vacuum
1–56.5 Sq. Ft. KS, Inconel 600
1–56.5 Sq. Ft. K-S, 316SS, flexibelt disch.
1–87.92 Sq. Ft. Feinc, SS wetted parts, spring disch., 56" dia. x 6' face drum
1–132 Sq. Ft. Dorr Oliver, 304SS, maxibelt disch.
1–200 Sq. Ft. Elmco, 316SS, 8'x8'
4–250 Sq. Ft. D.O. 316L SS Precoat, 8" x10', sanit
1–250 Sq. Ft. K-S 316SS, coil disch.
1–300 Sq. Ft. Elmco, 316SS wetted parts, precoat type w/knife disch., 10" dia. x 10' drum, complt. w/control panel & aux. equipment
1–314 Sq. Ft. Elmco, precoat disch., 316SS
1–400 Sq. Ft. Elmco, CS, Precoat
1–500 Sq. Ft. Elmco, 316SS, belt disch.
1–3'x1' 316SS, knife disch.
1–3'x1' Dorr Oliver, FRP w/receiver & Nash H4 vac. pump, 10 HP
1–3'x 1' K-S comp. sys., 316 SS Flex-belt disch

COFFEE PLANT LIQUIDATION
(1) Mdl. #DASO-6 Fitzmill w/15 HP motor, on stand.
(1) Mdl. #D-6 Fitzmill w/15 HP main motor & 2 HP on stand.
(1) Mdl. #2DH Micro-Pulverizer.
(1) Mdl. #3TH Micro-Pulverizer, SS, w/40 HP main motor & ¾ HP screw motors.
(1) Micro-Pulsair SS Reverse Jet Dust Collector, Model #64–8–8–20.
(1) 6" x 42" Votator Scrapped Surface Heat Exchanger, w/5 HP motor & jckt.
(1) 48" Sweco Single Deck Screen w/cover, SS constr., 1 HP
(1) 32" w. x 8' lg. Witte Vibrating Conveyor, SS, w/cover, 2-deck.
(1) 2'x6' Witte SS Fluid Bed Dryer w/perf. plate.
(1) 32" W. x 13' Sandvick Belt Flaker, SS, 9' cooling section.
(1) Stokes Freeze Dryer System, complt. w/prebreaker, micro-vac. & York chiller.
(2) Jones Dewatering Presses.
(1) 1500 Gal. SS Jcktd. Mix Tank, 3 HP, dished top, flat bottom.
(2) 2000 Gal. SS Mix Tanks, sanitary fittings.
(2) 1500 Gal. SS Mix Tanks, sanitary fittings, ¾ HP Lightnin.
(1) 2000 Gal. SS Mix Tank, sanitary fittings, 3 HP Lightnin.
(2) 2000 Gal. SS Storage Tanks.
(2) 1500 Gal. SS Mix Tanks, sanitary fittings, 3 HP Lightnin.
(1) 1000 Gal. SS Storage Tank, agitator mount, (no agitator)
(1) 1000 Gal. SS Jcktd. Mix Tank, atmos. int., 150 psi jckt.
(3) 1500 Gal. SS Mix Tanks, 3 HP Lightnin.
(1) Gaulin Homogenizer, KL 61 BS, Type 620 HG, SS.
(1) Gaulin Homogenizer, KL 36 BS, Type 120 HG, SS.
(2) 22' Dia. Spary Dryers, complete system.

FOR ADDITIONAL INFORMATION–CALL IDM TODAY...

RECENT PURCHASES
(1) Carrier 2'x46' Vibrating fluid dryer, 316SS
(1) Podbielniak mdl. #9700-2 Cent., 250 PSI
(1) 5,000 gal. CS, Vertical Sphere, Rated 1007 PSIG
(2) 12¾' dia.x307½' Long Packed Col. 304SS, 275 design pres.
(1) 64 sq.ft. U-Tube Heat Exchanger, all 316SS 75/150 psi
(1) 88 sq.ft. Heat Exchanger, all 316SS 75/450 psi
(1) 88 sq.ft. Heat Exchanger, CS/SS 75/450 psi
(1) 90 sq.ft. Heat Exchanger, CS/SS 75/75 psi
(1) 880 sq.ft. Heat Exchanger, CS/SS 75 PSI Shell
(1) 1008 sq.ft. Heat Exchanger, All 316SS 75/150 PSI
(1) 1401 sq.ft. Reboiled CS/SS 75/150 PSI
(3) 550 gal. Levus Lined Plastic Tanks 4'dia.x6½' st.sd.
(2) Fairbanks Morse Gas Compressor 3380 CFM 600 h.p.
(2) I-R Type ESV Compressors 30 HP
(1) GATX Fuller Air Compressor 50 HP
(1) Corken Compressor 7.5 HP

MANY MORE ITEMS IN STOCK-CALL IDM TODAY!

RIGGING/DISMANTLING DEMOLITION/ASBESTOS REMOVAL
WE ARE EXPERTS AT DISMANTLING, REERECTION, RIGGING DEMOLITION AND ASBESTOS REMOVAL WITH TERRIFIC REFERENCES BOTH NATIONALLY AND INTERNATIONALLY
CALL US TODAY FOR A QUOTATION ON YOUR CURRENT NEEDS OR ADD US TO YOUR BIDDERS LIST FOR ANY FUTURE PROJECT (201) 390-9550

GLASS...GLASS...GLASS
WE ARE GLASS SPECIALISTS WITH A TREMENDOUS INVENTORY FEATURING UNUSED, USED AND REGLASSED ITEMS. OUR SHOP PERSONNEL ARE FULLY TRAINED TO HANDLE GLASS.

REACTORS
Glass Lined
4,000 Gal. Pfaudler, 100/90 psi, TW
4,000 gal Pfaudler, 50/30 psi
3,700 gal Glascote, 50 & FV/90 psi
3,000 gal Glascote, 50 &FV/ 90 psi
3000 gal Pfaudler, 75/90 psi
2,000 gal Pfaudler, 75/90 psi
1,000 Gal. Pfaudler, 100&FV/90 psi, 4RW
1,000 Gal. Pfaudler, RA60 Series, 100& FV/90 psi, 4DW
1,000 Gal. Pfaudler, RA60 Series, 100& FV/90 psi, 4TW
800 Gal. SS clad, 60/60 psi
750 gal. DeDietrick, Phila drive
500 Gal. Pfaudler, 100&FV/85 psi, BH drive

Stainless Steel
4,000 Gal. 316SS, Atmos./50 psi, withcoils
3,000 Gal. 347SS Blaw Knox, 150/50 psi
2,500 Gal. 316L SS, 75/75 psi, 150 psi int. coils
2000 Gal. Nooter Autoclave, 316L 2000 psi, FV int. coils
2,000 Gal. Dusenberg, 316 SS,15/35 & FV Int., 50 psi jkt.
1,750 Gal. 316SS Nolte, 1467/50 psi
1,500 Gal. 304SS, 10 HP Lightnin
1,500 Gal. 304 SS, 100/30 psi
1,000 Gal. 304SS, 250/80 psi
1,000 Gal. 316SS, 50/75 psi jkt
1,000 Gal. 316 SS, 15 & FV/50, 10 HP
1,000 Gal. 316 SS, 100/30 10 HP
750 Gal. 316SS, 75 & FV/50 psi
750 Gal. 304SS, 50/60 psi
600 Gal. 316SS, 3000psi, 10 HP
600 Gal. SS, 50 psi, 1.5 HP XP
500 Gal. 316SS, 55 & FV/55 psi
450 SS, 60/75 psi
100 Gal. 316SS, 15/50 psi
100 Gal. 316ELC SS, 500/90 psi

★★★ SPECIAL OFFER ★★★
4-DRAIS SAND MILLS, TYPE PM-80-STS-DDA. MANUFACTURED 1984-85.
PRICED TO SELL • CALL FOR DETAILS

MIXERS
4.5 Gal. Kneader Master Cont., SS w/jkt.
5 Gal. AMK 304SS Jcktd. Kneader Extruder
15 Gal. W.C. Readco Sigma Blade Dbl. arm
25 gal. Readco DBL/Arm Sigma Blade jktd. SS construction 15 H.P.
80 Gal. Hockmeyer Pony, SS contacts, 7.5 HP varispeed
100 Gal., SS, Sigma Blade, Jcktd. 40 HP
200 gal. W-P CS dble arm Sigma blade, 20 HP
250 gal. AMK Kneader Extruder, Sigma Blades, CS construc, 40 psig, trough jkt.
500 liter Welex hi intensity, SS contact parts
500 Gal. S-W Rubber Cement, CS, 2-10 HP motors (2)
Unused 1000 Gal. Sanitary 316SS B-K Dbl. Motion Change Can; 100&FV/165 PSI, 125HP
Littleford Model FKM-600D, SS
Littleford Model FKM-600S, SS
Littleford Model FKM-2000, SS, w/choppers
7 Cu. Ft. 304SS Nauta Model MBX-70
10.6 Cu. Ft. Nauta D-105, CS
Welding Eng. Model 2FV1V2S Twin screw Extruder, SS, Contacts, 150 psi
Koehring mdl. 350, 40 HP
NEW/NEVER USED 75/37.5 HP Hockmeyer Disperser
PLUS LOTS - LOTS MORE

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WE'RE THE LIQUIDATION SPECIALISTS

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JUST PURCHASED

22435-Mieli Mixer, 250 G. sigma, S/S, jkt., vac, 100 HP
22448-B.P. 100 gal. Sigma, S&S, tilt.
22447-Dyna Mill mod. KD200, horiz. (2)
22446-Pfaudler 30 gal. G/L reactor (2)
22439-B.P. 100 gal. Sigma, S/S
22440-B.P. 200 gal. Sigma, tilt.
22441-Pappenmeier 600 gal. Liter Mixer/Coller
22460-P.K. twin shell blender, 1 cu. ft. 325 lbs/cu. ft. L/S stainless, w/drives 5 HP bar, ¾ HP main.
22461-P.K. 1 cu. ft., S&S, 275 lb. density, 30 lb. jkt., vac., ¾ HP vari speed main, 2 HP bar.
22314-Sharples #16 Super Centrifuge S/S, 3 HP, cooling coils clarifier (22)
22351-Atlas Copco air compressor, 600 CFM @ 125 psi, 125 HP. (5)
22198-Gouda Flaker, 4'x4' stainless steel.
22199-Gouda Flaker, 4'x4' stainless steel.
22344-Christian ribbon mixer, 36 cu. ft. steel jacket, 7.5 HP, unitized.
22342-Sheet extrusion line, Prodex 4.5", 24:1 L/D, 50 HP, stheet die, chill roll stack, Famco shear.
22343-NRM Terret Winder, 48-46 w/2 adjusto speed motors, 1 HP
22346-Sheet Coater, 54" steam heated.

22344- Christian Ribbon Blender, 30 cu. ft., C/S dbl spiral Ribbon Inner & Outer

22449-Gemco 10 cu. ft S/S, jkt. L/S processor
- Conair Water Chillers, 7.5 ton. (3)
- Conair mod. Plow-15 ton.
- Acrison mod .203-1052, 1½", 2½", 4" auger w/ drives (3)
- Sparklor mod. 18S11, T304 S/S
- Walter 750 gal. reactor, FV/100 lb., jkt. 40 lb., 30 HP vari dual motion.
- Walter 225 gal reactor, FV/100 lb., jkt. 40 lb., 10 HP vari dual motion.

Stokes mod. 280 F, 100 ton press.

MIXER/EXTRUDER

22352-Twin screw extruder (NA Bitruder Co). 65 mm, elect. heated, 20 HP DC, pellet die, vac pump used 100 hours
17654-AMK 25 gal. Mixtruder, Sigma, ST 7.5 HP.
18298-J H Day 25 gal. Dispersion, 25 HP vari main, 10 HP vari screw.
20996-AMK 30 gal S/S. jkt. Sigma, 7.5 HP Main, 6 HP screw
21334-Ross 40 gal., S/S hot oil jkt., Sigma 6" disch. screw.
19826-AMK 50 gal ST., jkt., Sigma
19421-AMK 75 gal. ST., jkt., Sigma, 10" disch. screw.
17136-AMK 120 gal., ST Sigma, 11.5" screw.
14832-AMK 150 gal., S/S, Sigma 15HP main, 10HP screw
19494-AMK 150 gal., S/S Sigma, 50 HP main, 10HP screw
20116-AMK 150 gal., ST, Sigma, 15 HP/10 HP
503527-New Aaron 300 gal., T304SS, mix extruder, Sigma, jkt., up to 200 HP main, 75 HP hyd. screw. STILL INSTALLED.. CALL NOW!
504528 - Aaron 300 gal. mixer/extruder T304SS, Sigma 150 HP, screw 75 HP hyd. jkt. 200 psi

21350-B.P. 500 gal. Sigma steel, jkt. 125 psi, 150 HP, Hyd. tilt
Vac Cover, Excellent Condition
Call Steve (312) 350 - 2200

MIXERS – PLOW

503755-Littleford, FKM 600D, SS jacketed, 25 HP.
20754-Littleford, FKM 3000D 65 CF, S/S, full jacket.
19214-Now Plow Mixer, 80 cu ft. 347SS, jacket, 100HP.
20829-Littleford FKM 4200D, S/S, 87 cu. ft JKT.

MIXER RIBBON

21120-Ribbon Blender, S/S, 10 cu. ft., jkt. SS, 150 psi.
20276-Read ribbon blender, 14.7 cu ft. 304SS, 3 HP.
20616-Unused Day, 316SS, 23 cu. ft., 5HP.
20189-Robinson, 25 cu ft., S/S, jacket, 10 HP.
20985-Int'l 34 cu. ft. S/S dbl. ribbon, 5 HP. (4)
20212-Haas ribbon, 36 cu. ft., S/S, 15 HP.
19266-Ribbon Mix 80 cu. ft. T304 SS, 5 HP (4)
19568-Howe, 115 cu. ft., sanitary S/S, double spiral ribbon
20983-Strong Scott blender, 130 cu. ft., 304SS, 25 XP gear motor.
21124-Ribbon Blender, 304SS jkt., 160 cu. ft., 30 HP.
20614-Unused JH Day ribbon, S/S 270 cu. ft., 25 HP.
21114-JH Day ribbon blender, S/S clad, 75 HP, 480 cu. ft.

FILTER PRESSES

19848-Shriver P&F filter press, 12"x12" alum plates, closed delivery, 23 chambers.
20534-Sperry Filter Press, 30", alumn.
20539-Sperry filter press 30", 35 Aluminum plates, 357 sq
15370-Shriver 32" x 32", polypropylene, 27 plates, ratchet closing.
15929-Shriver ALP, plate & frame, 18 36" x 36", S/S recessed plates.
19799-Clow/Bethlehem filter press, 36", recess plates, 25 chambers.
20076-Sperry filter press, 36", cast iron plates, closed delv.
19462-Independent filter press, 42" x 42", polypropylene, 4 eye closed, 34 chambers.
20550-Sperry filter press, 42" Ehd closer, 41 alum. plates.

CANADIAN BUYERS
LIQUIDATION–QUEBEC

22373-Reactor, 3500 gal. 8'x9'H, S/S clad, agit, dimple jacket.
22381-Reactor, 5000 gal. 10'x92"H, T316S clad, internal 330 lb., jkt 75 lb., agit 30 HP, vari speed. (2)
22379-Philadelphia, 7V63 agit drives, 10 HP, S/S (4)
22386-Siebtechnik H-400 centrifuge conturbex horz. screen, S/S, 20 HP.
22365-Climatrol water chiller LFV151172, 40 tons.
22385-Cyclone Sepeartor, 40" dia. x 2' plus 6" cone, S/S, Joy fan 15 HP.
22375-Sweco 30", 3 deck, S/S, ½ HP (2)
22387-Waukesha mod. 300, Sani pump, 6"x6", 15 HP.

FILTER-ROTARY VAC.

15828-FE, Inc. 36" dia. x12", S/S, string disc., 1/2 HP.
17477-FE, Inc., 3' dia x 6', T316SS, belt disc., vac pump.
11177-Dorr Oliver S/S, 5' dia. x 6'L
11653-Oliver T-316SS, precoat 5'3"x8'.
19431-K.S. flexibelt, 6' dia. x 6' face, 316SS.
18392-Eimco belt filter, 8'x10', steel drum, w/Nash pumps
15827-Ametek, 8' dia x14'0" face, maxi-belt, S/S.
17936-Eimco, 316SS, 10' dia. x 14', knife discharge.
17263-Impco belt filter, 12' dia. x 12', 304SS, Nash vacuum.
20251-K.S. T304, vacuum filter, 12' dia x 14', 304SS.
20323-Dorr Oliver 11'6"x16' face, S/S cont. parts.
11486-Eimco 10'x10' rotary vac. filter.

PRESSES

UNUSED Manesty Express, 10 ton, 20 stations.
11602-Colton Press mod. 280, 31 die stations, 1800 TAB.
21382-FJ Stokes rotary tablet, 15 station, 10 ton.
21418-Manesty rotary tablet, 16 station, 10 ton.
14425-Stokes Tab Press mod. #551, 51 station, 4 ton.
21417-FJ Stokes rotary, 27 station, 4 ton, double sided.
503681-Komerak Greaves, mdl. 75MSS briquetting press, 20.5" dia. x 4.5" face.
13392-Fitzpatrick Chilsonator, 50 HP, mdl. HA-50-30-210
18802-Stokes single pucnh press, 900-530-1 (T4), 12 ton.
17224-Dorst compac., series TPA15, 20 tons.
10890-Stokes, mdl. R-4 press, 20 ton.

22215-Wilmes Bladder Press, S/S, 38" dia. x 9'9" long, horiz, 5 HP, unitized. (2)

DUST COLLECTORS

21125-Fabri-Jet jdl. SQ8-48 bin vent, 42 sq. ft.
16398-Mikro dust collector, S/S, 63 sq. ft., mdl. 9-6-100, pulse jet.
21153-EVO, bin vent, 72 sq. ft., S/S, 5 HP
20253-Unused EVO pulse jet collector, mdl. 84BF009C, 90 sq. ft.
21192-JH Day mdl. RJ-18RJ36, 125 sq. ft., CS, 3 HP.
21222-Fabri-Jet, mdl. SQ16-80, 151 sq. ft.
20398-Pulse jet collector, "FlexKleen," mdl. 58CT24 AV II w/175 sq. ft., cloth, C.S.
21288-Mikro dust collector, 285 sq. ft., S/S.
20256-Unused EVO Corp. pulse jet dust collector, mdl. 99BF030C, 350 sq. ft.
20255-Unused EVO Corp. dust collector, shaker type, mdl. MS049010, 575 sq. ft.

SCREENS

21203-Sprout Waldron sifter, D10, 6 decks.
21150-Sprout Waldron, D10, 1 HP, 10 decks, S/S cont.
21167-Sprout Waldron, D10, 2HP, 10 decks, S/S cont.

UNUSED CENTRIFUGES

21593-Sharples P5400 Sanitary Centrifuges w/200 HP motor, 25 HP back-drive, gearbox, 5" pitch conveyor, CIP, control panel (2) LATE MODEL

CENTRIFUGES

20827-Bird, 18"x24", steel, conical bowl
20826-Bird, 24"x38", steel, con. bowl, gearbox
20819-Bird, 24"x38", S/S, 15 degree, contour bowl
20684-Bird 24"x60", H series, steel w/motor
20364-Bird 32"x50", SS T316 contour, 75HP
12883-Bird 36"x96", contour, 10 deg. T317 ELC
20137-Alfa Laval, NX 418-B31 60, 316SS gearbox
17308-Dorr Oliver, 304SS, Merco mdl. 16L, 30 HP
13565-Sharples, mdl. P 600, gearbox, motor
19767-Unused Sharples, 3 phase, P3000, S/S, carbide
20407-Sharples P2000 316SS, 20 HP drive motor
21359-Sharples P3000 w/gearbox
20686-Sharples P3000, 52:1 gearbox, S/S casting
21725-Sharples, P3400, S/S, gearbox & motor
19249-Sharples, P5400, 316/317SS, 200 HP, gearbox

CENT-BASKET VERT.

21408-Delaval 22"x16" perf basket hyd. drive
15815-Delaval Mark III, perf. basket, 40"x24", 316SS, 30 HP, hydr. drive.
19446-Sharples Sludge Pak, SP-5500, 40"x24" basket centrifuge

ROTARY VAC DRYER

22210–Bertrams, S/S 6'dia. x 12' dished heads, half pipe coil jacket 200 psi, 20/13 HP, unitized.

FILTER PRESSES

19846-Shriver P&F filter press, 12"x12" alum plates, closed delivery, 23 chambers.
20534-Sperry Filter Press, 30", alumn
20539-Sperry filter press 30", 35 Aluminum plates, 357 sq
15370-Shriver 32" x 32", polypropylene, 27 plates, ratchet closing.
15929-Shriver ALP, plate & frame, 18 36" x 36", S/S recessed plates
20076-Sperry filter press, 30", cast iron plates, closed delv.
19462-Independent filter press, 42" x 42", polypropylene, 4 eye closed, 34 chambers.
20550-Sperry filter press, 42" Ehd closer, 41 alum. plates

POWDER METAL HYD. PRESSES

22505 Bliss 250 ton dual pressure w/controls. Reconditioned 1984.
22506 Hannifin 80 ton w/pumps, etc.
22507-Bliss 230 ton dual pressure w/pumps & contrs
22508-Lawton 90 ton, dual pressure self cont. w/contr.
22509-Lawton 225 ton upacting, hyd. pump & motor.

AVAILABLE FROM EAST COAST
"High savings before removal"
CALL: Miko Cohon

TANKS-S/S

22257-UNUSED Tank, 100 gal., T304SS, 30" dia., DH
22253-UNUSED Tank, 550 gal., T304SS, 4' OD, DH.
22256-UNUSED Tank, 1200 gal., T304SS, 5' dia. x7'H, DH.
21283-Tank, S/S vert., 1200 gal., 6' dia x6', flat top & bot.
22255-UNUSED Tank, 1800 gal., T304SS, 6'6" dia. x 7'3"
22254-UNUSED Tank, 3,000 gal., T304SS, vac., 5'dia x 21'H, coil.
20651-Tank, SS, 9000 gal., agit., 12' dia. x 14'6" H.
20655-Tank, SS, 12000 gal., 12' dia. x 14', flat bottom, open top.
17043-Jos Oat horz. tank, 304SS, 16,000 gal., 12'6" dia. x 22'9½" long, 10 PSI.

REACTORS

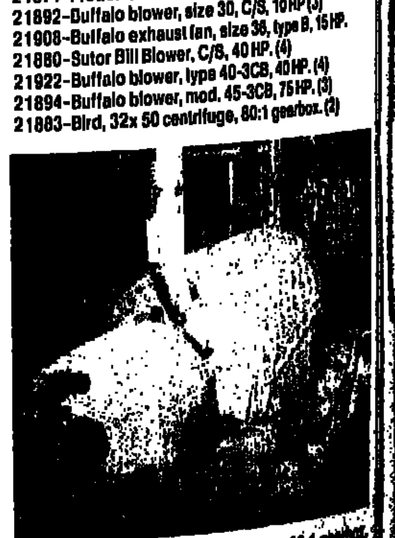
20252-Unused Reactor, 600 gal., 304SS dimple jktd.
10138-Pfaudler, 800 gal., T-316 L SS, 55 PSI int/150 PSI.
20928-Brighton, 4000 gal., 8' dia. x 10', 316 ELC S/S
20456-Reactor, 4,000 gal., 316 S/S, 8' dia. x 7'9" st. side.
16475-Brighton, 4000 gal., 316SS, vacuum.
20287-GH Hicks, 4000 gal., 316 SS, pipe coil jkt.
20923-Richmnd Eng. Reactor, 4600 gal., T316 stain/clad.
Pfaudler 10,000 gal. reactors T316L, 100 psi int, 180 psi.
Pfaudler 15,000 gal. reactor T316L, 100 psi int., 200 psi jkt.

LIQUIDATION SALE

LARGE POLYSTYRENE PLANT

ILLINOIS LOCATION

21899-Pfaudler Reactor, 1,500 gal., 316L SS dimple jkt.
21896-Pfaudler Reactor, 10,000 gal. 316L SS clad, 60 HP. (4)
21900-Pfaudler Reactor, 15,000 gal. 316L SS dimple jkt. (3)
21897-Metal Arts Corp. vessel, 17,000 gal. vert. 317L SS. (2)
21898-Brighton Corp. Tank, 12,000 gal. vert., solid 316L SS. (2)
21875-Bins, 176 cu. ft., S/S, cone bottom flat top. (4)
21891-Bins, 450 cu. ft., C/S, epoxy lined. (8)
21904-Bins, 450 cu. ft., C/S, epoxy lined. (6)
21905-Bins, 500 cu. ft., C/S, epoxy lined, flat top, conical bottom. (4)
21918-Worthington cent. pump, C/S, 15 HP, 200 GPM at 44 psig (2)
21916-Union Pump-Inline, C/S, mod. 4x6x8.5 VCK, 40 HP. (4)
21906-Edw Renneburg Rot. Dryer, S/S, steam heat, 10 HP. (4)
21881-Heaters, C/S steam, type BNF 2420 (6)
21914-Flotronics bin vent, filters, 122 sq. ft., 12 bags.
21889-Katron Feeder twin screw, S/S mod. 5400-150 (4)
21901-Sparkler filter, 352 sq. ft. C/S, mod. VR-32-32.
21882-Screw conveyor, 304 SS, 7" dia. x 11L, 1.5 HP.
21888-Strong Scott Rib Blender, 25 cu. ft., 5 HP. (3)
21920-Welex extruder 6", 30:1 L/D, 400 HP.
21870-Welex extruder 8", 30:1 L/D, 600 HP.
21876-Conair pelletizer, S/S, mod. 1024, 40 HP. (2)
21874-Water bath, S/S, portable. (4)
21887-Ross Static Mixer, 304SS, 3"x6 element. (4)
21917-Ingersol Rand pump, In-line pump, C/S, 30 HP.
21915-Goulds, C/S turbine pump, 200 HP. (2)
21913-Worthington cent. pump, S&S, 2 HP. (4)
21912-Union pump-Inline, S/S, 7.5 HP (2)
21910-Tank, 840 gal., flat top & bottom.
21920-Modern Welding Tank, 4800 gal. horiz. rubber lined.
21878-Gorman Rupp pump, centrifugal C/S, mod. 82EZ. (2)
21871-Prodex extruder 8", 30:1 L/D ratio, 800 HP.
21892-Buffalo blower, size 30, C/S, 10 HP (3)
21908-Buffalo exhaust fan, size 36, type B, 15 HP.
21880-Sutor Bill Blower, C/S, 40 HP. (4)
21922-Buffalo blower, type 40-3CB, 40 HP. (4)
21894-Buffalo blower, mod. 45-3CB, 75 HP. (3)
21883-Bird, 32x 50 centrifuge, 80:1 gearbox. (2)



21883-Bird Centrifuge, 32x50, 80:1 gearbox.

21893-Environeering scrubber, mod. [illegible]
21895-Tank, 850 gal. vert. coal tar epoxy [illegible]
21911-Tank, 84000 gal. vert. C/S epoxy [illegible] top/bot.
21903-Tank, 50,000 gal. vert. C/S epoxy [illegible] cal top.
21902-Worthington compressor, mod. [illegible] psi. (2)
21879-Sweco sifter 60", mod. LS60S8 [illegible]
21923-Kason sifter 60", mod. K60[illegible]
21884-Flotronics Cyclone mod. FT[illegible] 12" dia. dish top. (3)

ATTENTION
EAST COAST BUYERS
61,000 gal. Tanks, T304SS, 16' [illegible] top & bot., Chemineer Agit., mod. [illegible] HP, 27 RPM. (4)

ME SELECT used machinery

STRONG SCOTT SOLIDAIRE DRYERS

-Mdl SJS-24-16, 24" dia x 16' lg, 304 S/ST, dimple jacket, 50 HP vari drv.
-Mdl SJS8X523, 8" dia x 52" lg, inconel, jacketed, pilot size.
-Mdl SJI-42-22, 42" dia x 22' lg, Incoloy 800 w/carbon steel jacket,-100 HP exp prf mtr. (2)
-Mdl SJI-54-32, 54" dia x 32' lg, incoloy 800 w/carbon steel jacket, 125 HP exp prf mtr. (2)

EIMCOMET ROTARY VACUUM PRECOAT FILTERS

5' dia x 8' wd, S/ST, system includes drives, vacuum pump & receiver.
TWO AVAILABLE

EIMCO BELT FILTER

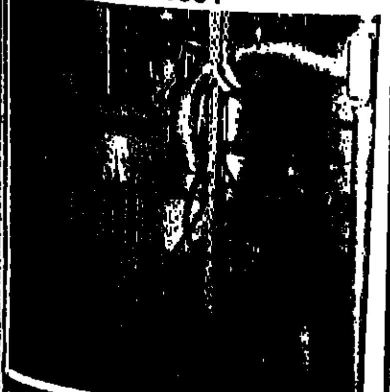
8'x8', S/ST, w/polypropylene belt.
TWO IN STOCK

MILLS

-Disintegrator, Rietz, RD-18-H132, carbon steel.
-Fitz, DKASO12, 20 HP V-belt drv.
-Fitzpatrick, DKASO12, water cooled bearings. (4)
-Fitzpatrick, DASO6, S/ST, fixed blades.
-Hammer, Williams, 24" x 54", Flextooth, mdl 250.
-Hammer, Jeffrey, 24" x 30", Flex Tooth Crusher
-Hammer, 14" x 18", Prater, carbon steel.
-Hammer, American, 10" x 15", 10 HP.
-Hammer, Sturtevant, 18", carbon steel. (3)
-Hammer, Sturtevant, carbon steel, swing hammers.
-Micro pulverizer, mdl 10ACM, single screw.
-Micro pulverizer, mdl 2TH, carbon steel.
-Micro pulverizer, lab sz, screw feed.
-Ball, Trexler, 7' x 10', rubber liners.
-Ball, Hardinge, 7' x 48", conical, air swept.
-Ball, Paul, 40" x 48", porcelain lined.
-Ball, ball, 2'x3', porcelain lined.
-Ball, jar, 3'x7', carbon steel.
-Pebble, pebble, 54" x 41½", porcelain lined.
-Pebble, pebble, 3½ x 3, Abbe, lined.
-Pebble, pebble, porcelain lined, 18" x 24".
-[illegible], Morehouse Cowles, mdl B1400, 20 HP.
-[illegible], 4" x 8" rolls.
-[illegible], similar to Cowles mdl 10-25.
-[illegible] pulverizer, S/ST, 18", air swept.
-[illegible], 2' x 18" x 7', S/ST.
-[illegible], 5057, V-belt to 50 HP.
-[illegible], 240.
-[illegible], mdl 535, 200 HP.
-[illegible], Farrell, 2 roll, 20" x 60".
-[illegible], Stewart Bolling, 22" x 60".
-[illegible], S/ST, 2 roll, 7½ HP.

WESTFALIA CENTRIFUGE

Type SB80-06-177, SST, w/7 HP DRIVE.
NEW 1981



POLYPROPYLENE FILTER PRESSES

Shriver 36" x 36", closed delivery, 1⅞" thick frames, hydraulic closing system
FOUR IN STOCK

BIRD DECANTER

36" x 72", inconel, 10 deg. cylinder, 150 HP motor, complete w/washout assembly, gauges, valves, circulating oil system, oil pump & filter.
TWO IN STOCK

LINK BELT ROTO LOUVRE DRYER

10'3" x 36' lb, mdl 1003-36, complete system incl 50 HP drive, firebox w/200,000,000 BTU gas burner, all fans, duct work & controls, multi-cyclone collector, Sly 30,000 CFM baghouse.
EXCELLENT CONDITION–STILL INSTALLED
CALL FOR FOB PRICING

WYSSMONT DRYER

Mdl N-22, 8' dia trays 22 high, w/S/ST contact parts. May be shipped in one piece, steam heated.

ROTO LOUVRE DRYER

Mdl 900-32, 9' dia x 32' lg, steam heated, 30 HP motor, all fans & Flex-Clean dust collector

MIXERS

-Banbury, Farrell Birmingham, #11, 18" Ram.
-Conical, Patterson, 322 cu. ft., carbon steel.
-Double cone, Abbe, 40 cu. ft., carbon steel.
-Conical, Patterson Kelley, 10 cu. ft., S/ST.
-Crystallizer, 10'x38', w/mtr drv, gear & pinion.
-Disperser, Meyers, S/ST, 2 HP.
-Disperser, Meyers, S/ST, 2 HP.
Disperser, S/ST, Hockmeyer, ½ HP, S/ST
-Oakes, mdl 8MV-5A, 316 S/ST, 8 HP.
-High Intensity, Papenmeier, S/ST, 200 liter cap.
-Nauta, 35 cu. ft., carbon steel, mdl MBX-350.
-Paddle, 100 cu. ft., 80 cu. ft. wk, S/ST.
-Paddle, Marion, 3 cu. ft., mild steel, 30" x 24" x 26".
-Planetary, paint, 25 gal, S/ST, Ross, mdl HDM-25.
-Ribbon, 300 cu. ft. wk, carbon steel.
-Ribbon, 175 cu. ft., S/ST, 4' x 12' x 4'.
-Ribbon, 105 cu. ft., 4' x 7'4" x 4'6", double rbn.
-Ribbon, 80 cu. ft., Aaron, S/ST, [illegible]
-Ribbon, 60 cu. ft. wk, S/ST, double ribbon.
-Ribbon, 50 cu. ft., Johnson, carbon steel.
-Ribbon, 35 cu. ft., Aaron, S/ST.
-Ribbon, 20 cu. ft. total, 12 cu. ft. [illegible], carbon steel.
-Ribbon, 2 cu. ft., Paul O. Abbe, [illegible] jacket.
-Sigma blade, Baker Perkins, 200 gal, carbon steel.
-Sigma blade, [illegible]
-Sigma blade, lab, 2 gallon, [illegible]
-Tote bin, dumper, mix system, [illegible]
-V-type, Patterson Kelley, [illegible]
-Zig Zag, Patterson Kelley, [illegible]
-Mixmuller, Clearfield, mdl [illegible]

WEIGMAN & ROSE INCONEL REACTORS

850 gallon, 150 PSI internal, jacketed & coiled w/turbine agitator.
THREE AVAILABLE

FILTERS

-Plate & Frame, 36"x36", Shriver, Polypropylene.
-Plate & Frame, Shriver, 18"x18", S/ST, 18 S/ST.
-Pressure Leaf, Durco, MDL 2300-1700, S/ST.
-Pressure Leaf, 800 sq. ft., U.S. Autofilt, 316 S/ST.
-Pressure Leaf, 440 sq. ft., 316 S/ST, Vertical.
-Pressure Leaf, 423 sq. ft., Funda, 304 S/ST.
-Pressure Leaf, 300 sq. ft., Sparkler, HRC-3000.
-Pressure Leaf, 200 sq. ft., Industrial, 316 S/ST.
-Pressure Leaf, 100 sq. ft., Sparkler, Carbon Steel.
-Pressure Leaf, 100 sq. ft., Dorr Oliver, 316 S/ST.
-Pressure Leaf, 83 sq. ft., Sparkler, 316 S/ST.
-Pressure Leaf, 7 sq. ft., Sparkler, S/ST.
-Rotary, Vacuum, Disc, 4'x1 Disc.
-Rotary, Vacuum, Precoat, Eimco, 10'x16', S/ST.
-Rotary, Vacuum, Dorr Oliver, 8'x12', 316 S/S.
-Rotary, Vacuum, Eimco, Precoat, 6'x8', S/S.
-Rotary, Vacuum, 8'x7'6", 316 S/ST, Filtration.
-Rotary, Vacuum, 3'6" dia x 11' lg, Komline Sanderson.
-Rotary, Vacuum, Feinc, 3'x3', 316 S/ST, String.
-Rotary, Vacuum, Ametek, 3'x2', 304 S/ST, Precoat.
-Belt, Extractor, Eimco, 2'x8', w/Poly Neoprene.
-Belt, Extractor, Straight Line, 2'x5', Polypropylene.
-Belt, 1'x3', Eimco, Extractor, S/ST, Rubber/FBRGLS.

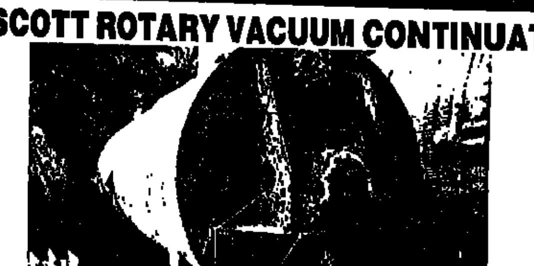
DRYERS

-Apron, Proctor Schwartz, 8' x 45', S/ST.
-Apron, Proctor Schwartz, 8'6" x 20'.
-Double drum, 42"x120", vacuum.
-Double drum, Blaw Knox, 36"x72", S/ST rolls.
-Fluid bed, S/ST, Carrier, continuous, 22"x14'.
-Mixer, vacuum, conical, Paul O. Abbe, 13 cu. ft.
-Rotary, 10' x 40', 304 S/ST, ⅜" thkl sh.
-Rotary, 6'x40', Aeroglide, carbon steel, gas.
-Roto Louvre, mdl 1003-36, 10'3" x 36', 50 HP.
-Rotary, vacuum, Strong Scott, Continuator.
-Rotary, vacuum, Strong Scott, Solidaire, Incoloy 800. (2)
-Rotary, vacuum, Strong Scott, Solidaire, SJI-42-22, Incoloy 800. (2)
-Rotary, vacuum, Solidaire, 42" x 26', carbon steel.
-Rotary, vacuum, Patterson Kelley, 1 cu. ft., S/ST.
-Tray, Stokes, mdl 38-4, 5 trays, 28" x 34", S/ST.
-Tray, vacuum, Stokes, mdl 128J-, carbon steel.
-Spray, Niro, atomizer, lab sz, 2'7" x 2'7". (2)
-Wyssmont, turbo, mdl L12, 12 - 40" dia S/ST trays.

EIMCO HORIZONTAL BELT

2' x 5', S/ST w/poly belt, compete system w/vacuum pump & drive.
2'x8', S/ST, w/poly belt, complete system w/vacuum pump & drive.

STRONG SCOTT ROTARY VACUUM CONTINUATOR DRYER



316 S/ST, mdl CRJ-S84-29, 1100 cu. ft., 150 HP drive, 550 sq. ft. of heat transfer area, 84" dia x 29' lg.
NEW 1986

RAYMOND ROLLER MILLS

(3) Raymond high side roller mills, mdl 5057, double whizzer separator, fan, feeder, cyclone, duct work & bucket elevator.

FLUID BED DRYER

Jeffrey fluid bed dryer, 5'x20', 304 sanitary construction, complete installation including fans, dust collector, S/ST scrubber & controls.

INDUSTRIAL PRESSURE LEAF FILTERS

(1) 800 sq. ft. & (1) 200 sq. ft. Rubber lined tank, quick opening pneumatic door, retractable tank assembly.
SAN FRANCISCO STOCK

SHARPLES P3400 DECANTER

Mdl 70-3400-384, 316 S/ST, unitized on stand.
SAN FRANCISCO STOCK

CENTRIFUGES

-Perf. bskt, Tolhurst, 20" x 12", S/ST.
-Solid bskt, Sharples, SP6800, 48" x 30", 316 S/ST.
-D-canter, Bird, 40"x60", 316 ELC. (11)
-D-canter, Bird, 36"x96", 317 S/ST.
-D-canter, Bird, 36"x72", inconel, horiz. (2)
-D-canter, Bird, Bird, 24" x 72", mild steel. (8)
-D-canter, Bird, 24"x38", 316 S/ST.
-D-canter, Bird, 18"x28", carbon steel.
-D-canter, Sharples, P5400, 316 S/ST.
-D-canter, Sharples, P3400, S/ST scroll, c/s bowl.
-D-canter, Sharples, PM20000, 316 S/ST.
-D-canter, Sharples, P660, 316 S/ST.
-D-canter, Titan Flottweg, My-T-Jector, Z1L, 316 S/ST.
-D-canter, Westfalia SDA230, S/ST. (2)
-Pusher, Krauss Maffei, sz 50, 18" bskt, 316 S/ST.
-Auto desludger, DeLaval, AFPX-409-18S-XGV, S/ST.
-Auto desludger, DeLaval, BRPX-309-SGB-30-60.
-Alfa Laval, SRG-509, S/ST, 10 HP.
-DeLaval, VO-194, S/ST internals, 7½ HP.
-Auto desludger, Westfalia, SAOOH-15036, S/ST.
-Auto desludger, Westfalia, SAMN-5036, S/ST.
-Auto desludger, Westfalia, SA-14-06-076, S/ST.
-Westfalia, Nozzle jector, SIG-15007, S/ST.
-DeLaval VO-194, S/ST, hermetic, 3 HP.
-Nozzle jector, Sharples, mdl DH6, S/ST.
-Westfalia, separator, RD-15004, S/ST. (2)
-Sharples, AS16, clarifier batch type, S/ST. (2)
-Podbielniak, Petrozon, mdl 8500, 48"x48", S/ST.

BIRD DECANTER CENTRIFUGES

40"x60", 316 S/ST, 15/30 deg. contour bowl, 100 HP drive.
EXCELLENT CONDITION–10 IN STOCK

WYSSMONT TURBO DRYER

Mdl L-12, S/ST, steam heated, 48" dia S/ST trays & sides, w/heater controls, radiator & feed system.

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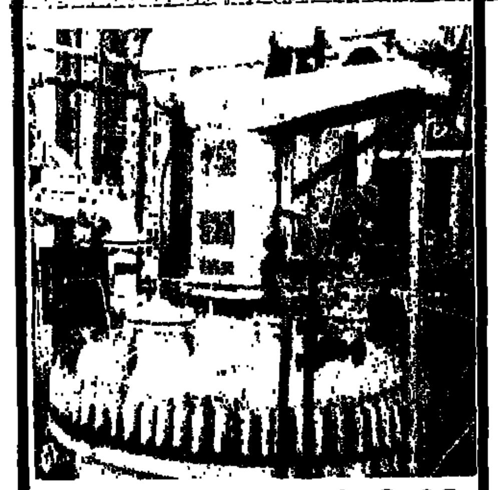


KETTLES–REACTORS, SS

30,000 gal. 304SS fermentors, 14' x 24', 25 psi/vac., coils, 200 HP agit. (4)
5,000 gal. 304SS, atm. int., 75 psi jkt., agit.
4,100 gal. 304SS kettle, 16 psi jkt., 5 HP agit.
3,500 gal. 316SS kettle, 20 psi jkt., 7½ HP agit. (2)
2,500 gal. 304SS reactor, 75 psi/FV int., 160 psi jkt.
1,500 gal. 304SS kettles, jktd., 5 HP agit. (3)
1,500 gal. Pfaudler 316L SS reactor, FV/160 psi, 5 HP Agit. (2)
1,150 gal. 304SS reactor, 15 psi int., 25 psi jkt., 5 HP agit.
900 gal. 304SS reactor, 75 psi/FV int., 150 psi jkt., agit.
600 gal. 304SS reactor, 300 psi int., 75 psi jkt., coils (3)
500 gal. 304SS reactor, 150 psi int., 150 psi jkt., 5 HP agit.
300 gal. 316SS reactor, 75 psi/FV int., 60 psi jkt.
(50)... 316SS and 304SS reactors and kettles from 5 gallon to 400 gallon... call for list.

BIG PFAUDLER 316SS REACTORS

(3) 15,000 gal. Pfaudler, 316SS, 12'6"x 15', 100 psi, 200 psi jkt. Agit.
(4) 10,000 gal. Pfaudler, 316SS, 11'6"x 12'4", 100 psi, 100 psi, jkt. Agit.

REACTORS–GLASS

2 gal. Pfaudler, 750 psi/FV, 700 psi jkt.
20 gal. Pfaudler, 35 psi, 100 psi jkt., agit. (2)
30 gal. Pfaudler, jktd.
50 gal. Pfaudler, 25 psi, 100 psi jkt.
50 gal. Pfaudler, 100 psi/vac., 85 psi jkt., agit., 1975
100 gal. Pfaudler, 25 psi, 90 psi jkt., agit.
150 gal. Pfaudler, 25 psi/vac., 90 psi jkt., agit.
300 gal. Glascote, 25 psi/vac., 90 psi jkt.
500 gal. Pfaudler, 100 psi/vac., 90 psi jkt., vari-drive agit.
500 gal. DeDietrich, 65 psi/vac., 105 psi jkt., 5 HP agit.
750 gal. Pfaudler, 25 psi, 85 psi jkt., 5 TW agit.
1,000 gal. Pfaudler, 100 psi, 90 psi jkt.
1,000 gal. Pfaudler, 75 psi/vac., 90 psi jkt., 10 HP agit.
1,500 gal. DeDietrich, 100 psi/vac., 90 psi jkt., 1981,
1,500 gal. Pfaudler, 100 psi/vac., 90 psi jkt., 25 HP agit.
2,000 gal. Pfaudler, 100 psi/vac., 90 psi jkt., 15 HP agit.
2,500 gal. Pfaudler, 150 psi, 90 psi jkt., #TW6 agit.

LIQUIDATION! CHEMICAL/POLYMER PLANT....ILLINOIS ..BUY BEFORE REMOVAL AND SAVE!!

Bird 32"x 50", centrifuges, 316SS, contour (2)
Welex 8" Extruder, 700 HP, 30:1 L/D (5)
Welex 6" Extruder, 400 HP, 30:1 L/D (2)
Conair 24" pelletizer, 40 HP (2)
Renneberg 5'x 25' 304 SS rot. hot air dryers, 10 HP, (3)
Sweco & Kason 60" screens, SS (2)
K-Tron 7000#/hr. twin screw volumetric feeder, SS, (5)
Pfaudler 1,500 gal. 316L SS reactor, FV/-180 psi' 5 HP agit. (2)
Pfaudler 10,000 gal. 316L SS reactor, 150 psi/FV int., 180 psi jkt., hyd agit (4)
Worth. Plant air comp., 323 CFM @ 125 psi, 75 HP, Model #4-BB-2 (2)
17,000 gal. & 12,000 gal. 316 SS Tanks (3)

PHONE (609) 267-1600

DRYERS

Blaw Knox 6'4"x 40' SS vac. dryer, 600 cu. ft.
Blaw Knox 36"x 20' vac. dryer 316L SS, 72 cu. ft.
Blaw Knox 66"x 36' vac. dryer, nickel
Mathis 24"x48" flaker, chrome plated
Sandvik 48"x24' SS belt flaker, UNUSED
Sargent 60" x 45' SS conveyor dryer
Blaw Knox 32" x 90" dbl. drum
Aeromatic #ST-5 fluid bed dryer, 5/10 KG
Witte 36" x 10' fluid bed, SS, sanit.-cooler
Renneberg 36" x 20" rotary dryer, 316 SS
96" x 50' Louisville SS rotary dryer
10' x 100' GATX rot. steam tube dryers, 140 psi (4)
Wyssmont #VTL-24 Turbo-tray dryer, 304SS
P-K 5 cu. ft. vac. dryer, 304SS
P-K 20 cu. ft. vac. dryer, 304L SS (2)
Abbe 30 cu. ft. 304SS vac. dryer
Devine 110 cu. ft. 304 SS vac. dryer
Pfaudler 165 cu. ft. glass-steel vac. dryers (2)
Abbe 325 cu. ft. 316SS vac. dryer
Devine 370 cu. ft. 316SS vac. dryer
Devine 564 sq. ft. vac. shelf dryer
Niro 30" SS spray dryer
Bowen 72" spray dryer, SS
Bowen 96" spray dryer, SS

FILTERS–VACUUM

36" x 1' Dorr-Oliver, fiber glass 9 sq. ft.
36" x 1' Ametek, 316 SS, 9 sq. ft.
40" x 3' Bird-Young, SS, 48 sq. ft.
4' x 16' Elmco, 316SS, 64 sq. ft., horiz.
6' x 3' Ametek, SS, 55 sq. ft.
6' x 4' Elmco, "Elmcomet" polypropylene, UNUSED
8' x 8' Elmco, SS, 200 sq. ft., precoat
8' x 10' Dorr–Oliver, 250 sq. ft., 316SS, precoat
8' x 12' Elmco, 316SS, precoat, 300 sq. ft., (3)
8' x 14' Dorr-Oliver, 316SS, precoat, 350 sq. ft. (2)
10' x 10' Elmco, 316SS, precoat, 314 sq. ft.
11'6"x 16' Elmco, SS contacts
12' x 14' Komline, 304SS, 525 sq. ft., flexibelt disch. (2)

FILTERS–PRESSURE

54 sq. ft. Funda, SS, jktd.
65 sq. ft. Artisan "Dynamic" filter/washer, SS (2)
140 sq. ft. Niagara # 36-140 316 SS (2)
300 sq. ft. U.S. Autojet, 316SS, Sanitary (2)
600 sq. ft. U.S. Autojet, 316SS, sanit.
1000 sq. ft. U.S. Autojet #1000, 304SS
36" Shriver filter press, 546 sq. ft., hydraulic
42" Shriver filter press, 777 sq. ft., hydraulic
48" Shriver ALP recessed filter press, SS, 276 sq. ft.
48" Poly Filter Co. polypropylene filter press, 2094 sq. ft., 87 cu. ft. cake, 1983

PULVERIZERS

Mikro #4TH pulv., 125 HP, UNUSED (15)
Mikro #5MA atomizer, 5 HP
Mikro #6MA atomizer, SS
Pallman #REF8 pulv., 100 HP
Pallman #PP8 pulv., 50/75 HP
Abbe porcelain pebble mills... 36"x42", 36"x48", 42"x60", 48"x60", 60"x48" (7)
Raymond #6058 Hi-side roller mills, dbl. whizzer (2)
Raymond #73612 Hi-side roller mill, dbl. whizzer

NEW LIQUIDATION... CHEMICAL PLANT...GARFIELD, N.J.

(4) 316SS packed columns; 18" x 18'; 20" x 12'; 36" x 23'; 36" x 40'
(1) 36" x 46' Glitch 316L SS column, 24 trays
(1) 48" dia. x 60' high SS tray column
(1) 60" x 60' Glitch 304L SS column, 60 trays, FV/75 psi
(1) 72" x 39' high SS column, 11 tray
(1) 78" dia. x 43' high Nooter SS column, jacketed, 25 psi/FV 150 psi jkt., 20 trays
(6) Niagara Aero heat exchangers, SS contacts
(21) Shell and tube heat exchangers, 316 SS and 304 SS: 12, 41, 92, 213, 297, 300, 320, 393, 400 (2) 431, 460, 522, 524, 527, (4) 600, 1050, 1300 sq.ft.
(2) Niagara #70-26 leaf filters, SS, 69 sq.ft.
(1) Niagara #110 leaf filter, 75 sq.ft., SS
(1) Mikro pulverizer #2TH, SS
(3) Patterson 200 gal. SS Sigma blade mixers, jktd., vac. cover, bottom disch., 20 HP
(1) Porter 82 cu.ft. 304 SS dbl. cone blender
(1) 8000 gal. 316L SS tank, 9' x 18', horiz., coils
(1) 6000 gal. 316L SS vert. tank, 7' x 21', 80 psi WP, coils
(2) 4500 gal. 316 SS tanks, 7'6" x 13', agit.
(1) 1800 gal. 316L SS tank/still, 6' x 8', w/coils
(1) 1500gal. 316L SS tank, 5'6" x 8', horiz., w/coils
(6) 316 SS and 304 SS tanks: 1200, 1100, 500 (2), 250, 200, 100 gal.
(6) 3000 gal. vert. steel tanks, 8' x 9'
(1) Industrial filter dual unit dionization system, #3853PBA, Type 268, W/(2) 316L SS columns, 316 SS exchanger and tank, controls, etc... built 1979.
ALSO – SS pumps; (9) rubber-lined tanks on scales to 7500 gal; Rotoclone SS collector; blower; etc.

Over (50) Bird & Sharples decanters

CENTRIFUGES

Sharples P-5400 D-Canter, 316SS, Carbide tiles, late (2)
Sharples P-3400 D-canter, 316SS, tiles (2)
Sharples P-5000 D-canter, 316SS
Sharples P-660 D-canter, 316SS, back drive
Bird 12" x 30", 316SS, Decanter, 20 HP
Bird 18" x 28", 316SS, Decanter (3)
Bird 18" x 42" Decanter, steel, 10/30
Bird 24" x 38" Decanter, 304SS, contour-10
Bird 24" x 38" Decanter, 316SS, contour (3)
Bird 24" x 60" Decanter, steel
Bird 24" x 86" Decanter, SS, 125 HP
Bird 24"x 96" decanter, 304SS, carbide tiles, 1981, UNUSED (3)
Bird 32" x 50" Decanter, Monel, contour (2)
Bird 32" x 50" Decanter, 304SS, contour
DeLaval NX214-31B Decanter, 304SS, 20 HP (2)
Sharples AS16V "Super," SS (5)
Sharples AS26V "Super," SS
DeLaval BRPX-213-30, 316SS separator/desludgers (3)
Westfalia SAMN15037, Desludger/Separator, 316SS
Westfalia SA14-35-076 3-way separator, 316SS
Krupp 10" pusher, 316SS, 15 HP
Baker-Perkins 19" pusher, 304SS, 40 HP
Sharples 48" T-1600 auto-basket, 100 HP
Tolhurst 48" Batchmaster, rubber lined, 30 HP
Sharples 48" Tornado-Matic, SS, 25 HP
Delaval 48" Mark 111, 316SS hyd.
CENTRIFUGE PARTS... Sharples, Bird, DeLaval, etc.

EVAPORATORS

2.4 sq. ft. Rodney-Hunt SS, 3 HP
21 sq. ft. Rodney-Hunt Turbafilm #4, SS
87 sq. ft. Rodney-Hunt, 304 SS, Turbafilm
100 sq. ft. Pfaudler, 316L SS, wiped film
600 sq. ft. Goslin-Birmingham dbl. effect, SS
854 sq. ft. Buflovak dbl. effect, SS
1688 sq. ft. Roger dbl. effect, SS
Swenson 316SS cntinuous crystallizer, 9" x 14'

TANKS & VESSELS

30,000 gal., 304SS, 14' x 24', coils, 200 HP agit. (4)
20,000 gal., 304SS, 12' x 24' (2)
17,000 gal., 304SS, 11' x 24' (3
17,000 gal., 316LSS, 14'x 13', Agit. (2)
12,000 gal., 316LSS, 12'x 14', Agit. (5)
10,500 gal., 316L SS, 8' x 25'
10,400 gal., 304SS, 10'6" x 16', agit.
8,000 gal., 304SS, 10'6" x 12'
5,000 gal., 304SS, 9'x9', 25 HP agit.
3,500 gal., 304SS, 8'x9'
3,000 gal., 304SS, 7'x 10', agit.

MIXERS, BLENDERS

3.5 cu. ft. Henschel #FM15D, 17/20 KW
11.5 cu. ft. Henschel #115JSS, 92/46 HP
13.7 cu. ft. Lodige #W600/K1200, mix/cool comb.
20 cu. ft. P-K twin shell SS
33 cu. ft. Abbe high intensity, SS, 40/20 HP
35 cu. ft. Day Nauta, #NBX350, SS
52 cu. ft. Nauta 304SS mixer (2)
60 cu. ft. Gemco ,TW SH, Sanit, SS
69 cu. ft. Patterson dbl. cone, SS
70 cu. ft. Day Nauta, #NB700, 10 HP
75 cu. ft. Day Nauta, SS, jktd.
75 cu. ft. Robinson SS ribbon blender, jktd.
98 cu. ft. Day Nauta, SS, 1981
110 cu. ft. J.H. Day, dbl. ribbon, 316SS
120 cu. ft. Cleveland ribbon blenders (5)
144 cu. ft. 304SS dbl. ribbon blender, 30 HP
169 cu. ft. Pfaudler, dbl. cone, glass steel jktd., vacuum
200 cu. ft. Young, ribbon, SS

NEW LIQUIDATION

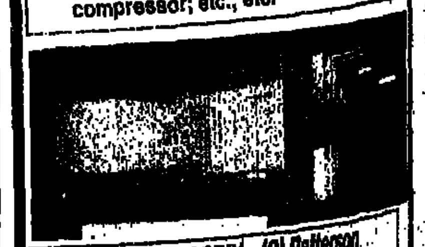
ULTRA-MODERN 5000 TONS/DAY BEET SUGAR PROCESSING PLANT & REFINERY... BUILT 1978, UPDATED 1983...LOCATED EASTERN CANADA, NEAR WATER... VERY BIG SAVINGS IN TIME & MONEY...CALL FOR DETAILS!

NEW & UNUSED PROCESS EQUIP., 1982, IN ORIGINAL PACKING ... SOUTH CAROLINA, CALL! Phone (609) 267-1600

BALERS, Dispozapak #D600 balers, (2)
BAG PACKER, Howe-Richardson #G-S-17 semi-automatic bagging system SS contacts
BINS, 304L SS contacts, 1300 cu.ft./9720 gal.
CENTRIFUGE, Bird 24"x96", 304SS, Model 15 solid bowl continuous, 10 deg. contour bowl, Tungsten carbide tiles on conveyor, 150 HP
CHLORINATION SYSTEM, Wallace & Tiernan
COLUMN, 46" dia. x 15'9", 304SS
CYCLONE, DuCon Model 700/175 304SS high efficiency cyclones, size 210, Type VM (8)
DRYERS, Nooter 4' x 14' rotary vac. dryer, 316L SS shell and jacket, Incoloy ribbon agit ASME 100 psi/FV int. & jacket. 100 HP
FURNACE, C-E Air Co. "Cor-Pak" thermo oxydizers, direct gas fired
MIXER, Air mix blender system, Koppers-Sprout Waldron #36-50, 500 cu.ft., 304SS
MIXERS, Webb, 59" W x 15'L twin shaft paddle mixers or pug mills, 304SS contacts, (2)
PULVERIZERS, Mikro #4TH pulverizers, 125 HP drive, (15)

... COMPOUNDING ... N.J.

(2) Munson 300 cu.ft. blenders, 104" dia., #TS-300GB, pkgd.
(1) Munson 110 cu.ft. blender, 90" dia., #700/110, pkgd.
(2) Munson 90 cu.ft. blenders, 80" dia., #7TS90, pkgd.
(2) 400 cu.ft. Gruendler ribbon blenders
(2) 215 cu.ft. Cleveland ribbon blenders
(2) Eirich 10' dia. intensive mix mullers, motorized pan and mullers
(2) Komline dbl. cone blenders; 320 cu.ft. (10' dia.), 69 cu.ft. (6' dia.)
(3) Gruendler hammermills, 150 HP, 1980
(2) Gruendler hammermills, 100 HP, 60 HP
(1) Mikro #8D atomizer pulverizer, 30 HP
(1) Mikro #4TH pulverizer, 50 HP
(2) Saw tooth brakers/crushers
(2) St. Regis baggers
(1) "Push-Pull" railcar unloading system
(25) Flexkleen, Dustex, etc., bag type dust collectors
(2) Box sifters
(1) Handling system w/(2) 2000 lbs. elevators, 80' powered roller conveyor, etc.
ALSO...laboratory with lab apparatus, tables, equipment, etc.; motor control center units; Gardner-Denver air compressor; etc., etc.



JUST PURCHASED!...(9) Patterson & Abbe batch ball mills & pebble mill, various sizes... CALL!

PERRY for Process Equipment

PERRY

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★ REACTORS ★

-4000 gal. 316 SS Reactor 90/50 psi half pipe jkt.
-13,500 gal. 304 Elc Dim., Jktd. vac. Reactor
-Downington 1500 gal. Monel Clad Reactor 65/70 psi
-Norwalk 3000 & 750 gal. SS Reactor dimple jktd. FV/50
-Pfaudler 500 gal. G/L jktd. vac. Reactor
-Pfaudler 9200 gal. G/L Reactor 90/90 psi Unused

★ PAINT PLANT LIQUIDATIONS ★

-Abbe 12"x18" steel, jktd., lab ball mill
-...HP, Cowles Dissolver, vari speed, hyd.
-...HP, Cowles Dissolver, fixed mount and speed
-...HP, Cowles Dissolver, vari speed
-...HP, Cowles Dissolver, vari speed, hyd.
-1½HP, Cowles Dissolver, lab
-1HP, Cowles Dissolver, lab
-15HP, Dissolver, vari speed
-5HP, Dissolver, straight speed
-30HP, Hill Homo Mixer
-15HP, Hockmeyer Dissolver, vari speed, hyd.
-40HP, Hockmeyer Dissolver, vari speed (2)
-Kady Mill, 100 gal. ss, jktd., 30HP
-Ross 3 Roll Mill, lab, 4½" x 10", 4"x8"
-Various Fixed Mount Dissolvers (10)
-Reitz disintegrator SS 5HP
-Schold Shot Mill 304 SS jktd. 100HP (2)
-300 gal. SS Dispersion Tank (50)

★ BLENDER & MIXERS ★

-150 cu. ft. Dbl. Cone Blender
-Baker Perkins 150 gal. C/S jktd. vac. flusher
-Baker Perkins Sigma Blade Mixer Lab. SS jktd. vac.
-Devine 100 cu. ft. Dbl. Cone Blender, C/S
-J.H. Day 23 cu. ft. SS Ribbon Blender
-J.H. Day 40 cu. ft. SS Ribbon Blender (3)
-Myers 10HP vac. speed Dissolver
-Nauta Mixer 70 cu. ft. SS 10HP (2)
-Patterson Kelly 1 cu. ft. Twin Shell SS 500 lb. Dens.
-Patterson Kelly 30 cu. ft. Twin Shell Blender
-Patterson Kelly 40 cu. ft. Twin Shell Blender SS
-Patterson Kelly 1500 cu. ft. C/S Blender 75HP
-Patterson Kelly 4 qt. SS Twin Shell/liq. solids
-Paul O. Abbe 90 cu. ft. SS/sanit. jktd. vac. Blender 50HP
-Readco Sigma Blade Mixer 10 gal. SS Dual Level (Like New)
-Ross 10 gal. Planetary Mixer SS
-Ross 15 gal. SS jktd mixtruder 7½ HP mdl. AMK 15
-Strong-Scott 20 cu. ft. C/S Ribbon Blender

★ GRINDERS & MILLS ★

-Alpine Sieve Model #A-32-100 LS
-Cumberland Grinder Size 14
-Entoleter Comptact Mill, Type EIM, SS, 30HP
-Fitzmill Model #D-6/DSAO/12, 30 HP SS
-Greerco Colloid Mill, 3HP & 5HP
-Micro Pulverizer 4 TH (3)
-Ross 3-roll Mill 4½"x10"
-Rotex Screener 2'x4'
-Simpson Mueller 6"x5" size 2 VD mixer 20HP
-Sweco Separator 48"/30"/24"/18"SS

★ FEATURED ITEMS ★

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-Meteer Filler Model #23X Auger Type SS/sanit.
-Patterson Kelly 1000 sq. ft. SS Heat Exchanger 150/180 psi

★ DRYERS ★

-Abbe 20 cu. ft. SS Conical Vac. Dryer
-Aeromatic Fluid Bed Dryer Lab. MDL- #ST-15
-Aeromatic Fluid Bed Dryer SS MDL 100ST 20
-Bowen Spray Dryers 7½' & 5' SS
-Fitzpatrick Fluid Bed Dryer SS Lab MDL #75
-Gemco Dbl. Cone vac Dryer 10 cu. ft. SS
-Jeffery Fluid Bed Dryers 2'x20' SS (2)
-Patterson Kelly Twin Shell 1&3 cu. ft. vac. processor SS
-Patterson Kelly Twin Shell vac. Dryer 75 cu. ft.
-Patterson Kelly 5 cu. ft. SS Conical Vac Dryer.
-Pfaudler Conical vac. Dryer G/L 72 cu. ft. compl. sys.
-Standard Hersey 4'x30' Rotary Dryer SS
-Stokes 5'x30' Rotary Vac. Dryer, jktd., SS
-Stokes Vac. Shelf Dryers 48.9 sq. ft. (7)
-Strong Scott Rotary Vac. Dryer SS 3'x12' Solidaire

★ FILTERS ★

-Bird (Plannevis) Filter SS, 12" wide x 17' long
-Elmco 4'x12' Vac. Belt Filter 316 SS
-Enzinger Leaf Filter SS 360 sq. ft.
-Evirex SS Rotary Filters 6 x 6
-Funda Filter 4' dia., SS, jktd. w/20HP Drive
-Hercules Filter 500 sq. ft. 316 SS
-Industrial Filter 100 sq. ft. Type 122 ID 21 MDL OMD
-Shriver 36" ALP 316 SS, 41, 48 Chambers (2)
-Sparkler Filter MDL #18 D-4 SS jkt/SS 8-6
-Sperry 42" Plypro Filter Press 48 Chambers
-Star SS Filter Presses 18" (5)
-US Autojet Filter SS 50 sq. ft.
-US Autojet, 750 sq. ft. MDL #750, 316 SS

★ CENTRIFUGES ★

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-Bird Centrifuge C/S 18"x28" Contour Bowl (UNUSED)
-Bird 36"x50" 347SS Contour Bowl
-Sharples 12" SS Lab Model/Brighton Lab
-Sharples P-3000 Decanter 30HP
-Sharples P-5000 Decanter SS 100HP
-Sharples Centrifuge 12" SS solid bowl w/ skimmer (2)
-Tolhurst Centrifuge 26" SS perf. basket

★ PILOT & LAB ★

-10 gal. SS jkt. Reactor w/½HP Chemineer Drive 150/150 psi FV INT. 750F
-Abbe Ball Mill SS jkt 15"x21", 1 HP
-Abbe SS Pebble Mill Type #0, 16 gal., 2 cu. ft.
-Aeromatic Fluid Bed Dryer SS 15 KG Mdl #ST15
-Artisan 1 sq. ft. wiped film Evaporator SS compl.
-Artisan 5 gal. 316 SS Reactor system 150/300 psi
-Cowles Dissolver 1HP MDL #1VG(2)
-Greerco Colloid Mill 10 Liter capacity, 3HP
-Littleford High Intensity Batch Mixer, SS
-Manton-Gaulin SS Homogenizer 3HP Mdl #25
-Morehouse Lab SS Sand Mill ¼HP Mdl #225
-Netco Dissolver 7.5HP (4)
-Patterson Kelly 4 qt. Lab SS Twin Shell Blender Type LB-S-4 Liquid-Solids
-Patterson Kelly SS Twin Shell Blender 1 cu. ft. 500 lbs. dens.
-Pfaudler 5 gal. G/L jkt. Reactor 120/150 TW Drive, Excel Glass
-Readco 5 gal. Sigma Blade Mixer C/S jkt. vac.
-Ross SS 2 gal. Lab Planetary Mixer MDL #130EL SS jkt. Bowl (2)
-Sharples Lab Centrifuges w/SS Bowl 1/10HP Type M-41-24
-Stewart Bolling 2-Roll Mill 3"x7" 1HP
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MIXMULLER-Simpson 1F, Style UD, 50" dia., S.S.
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PROCESSOR-10 cu. ft. P.K. V-type, S.S. Jkt. Vac. 550# (3)
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REACTOR-5 gal. Pfaudler, S.S. 316, 60/90 PSI, TW Drive
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SHARPLES 48"x30" T-1600 AUTO 316 SS (2)
SHARPLES Mark 3 14" SS perf. auto basket

MIXERS/BLENDERS

P/K 2, 10, 15, 75 cu.ft. SS Twin Shell w/bar
5, 20, 60, 70, 320 cu. ft. S/S dbl. cone w/drive
120,135, 155, 175, 250, cu.ft. dbl rib S/S
300 gal. J.H. Day Pony Mixer Steel w/can
(2) Vrieco 100 cu.ft. S/S Nauta Mixers

LITTLRFORD 42 cu. ft. S/S jkt. w/choppers
5, 100, 300, 750 S/S dbl. arm w/drive

DRYERS

Patterson 49 cu. ft. rot. vac. cyl. S/S 3'x 7'
P/K 5, 10, 370 cu.ft. SS liq-Sol. Processor
LOUISVILLE 8x45 SS Rot. Hot Air-Steam
BOWEN 4'6" No. 2 TOWER SPRAY DRYER S/S GAS NOZZLE
Spray Dryer, Bowen 30" lab, Niro 48" utility S/S

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28,000 GAL. HORIZ. 316SS Tanks 40# (2)
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MG 1000, 2000, GPH HOMOGENIZER 3000 psi.
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-100-10,000 gal. G/L Tanks & Reactors
Micro - Pulv. 1SH S/S 5HP W/Screw Feed

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S/S Reactor 100# F.V./Int.-40# jkt.
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Bird 40x60 316 S/S Cent. 114:1 100 HP
Feinc. 5'x7' S/S Rot Vac filter
40"x 120" S/S Rotex Vib. Screen 2-deck
12,000 gal Frp Vert. Tanks (2)
1000 gal. Pfaudler G/L reactor 75#/75# w/agit.
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CTFA Comments On Grey Market

In comments filed with the US Customs Service, CTFA requested that the service require the importers of "gray market" goods to obliterate the products' brand names ("demark" the products) before they enter the US market. "Gray market" goods are those that are made overseas by legitimate manufacturers, but imported to the US by someone other than the authorized U.S. distributor.

Customs has suggested two different methods to handle "gray market" goods — by mandatory labeling or by mandatory removal of the trademark. CTFA says it supports the agency action and notes that "mandatory removal of the trademarks is both the easiest and most effective solution to the problems caused by gray market goods."

CTFA says demarking would require less governmental intrusion and no expansion of the federal bureaucracy. However mandatory labeling would require either legislation or detailed regulations and then the additional task of reviewing each label to ensure that it contains the necessary information. Demarking, on the other hand, would only require Customs officials to make sure the trademarks hav been removed or obscured."

Demarking would have the additional benefit of assuring that an unauthorized distributor no longer may profit from the marketing investment and goodwill generated by the US trademark holder. Labeling of the goods would not address this problem, CTFA says.

CTFA adds that "demarking would also help alleviate the counterfeiting problem since gray market imports sometimes are intermingled with counterfeit goods." Demarking a shipment of gray market and counterfeit products would eliminate the incentive to use such a tactic to introduce counterfeit products into the market. CTFA says. With mandatory labeling, counterfeiters could simply affix the required labels and continue to ship their illegal products, it notes.

Caustic Soda Firm Names US Distributor

Elof Hansson, Goteborg, Sweden, says Gus Filer, Inc., Sudbury, Mass., has become the Swedish company's exclusive US representative for marketing and trading inorganic chemicals in this country.

The agreement opens the US market to Elof Hansson, the company says. It already markets chemicals out of Gothenburg, Sweden and in Rotterdam through its petrochemical trading affiliate, Tolson B.V.

GFI will mainly market liquid caustic soda in the US, supplied by Elof Hansson and produced by Huls in West Germany.

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CHEMICAL IMPORTS

Continued from Page 45

...Overseas Produce 250 bgs (6724 lbs0 (Santa Fe) Callao, 11/3.

...LIC ACID T R America Chemicals 1430 bgs (78814 lbs) (Bacol Vitoria) Rio D Janeiro, 10/24.

...AROSA OIL Bush Boake Allen 4 dms (1775 lbs0 (Neptune Garnet) Yokohama, 10/23.

...2 dms (895 lbs) (American Oklahoma) Singapore, 10/29

...KA A A Sayle 300 bgs (33234 lbs) (Independence) Valencia, 10/20.

...Freight 18 dms (6217 lbs) (Italica) Alicante, 10/24.

...FIN WAX 1 bks (1939307 lbs) (Stolt Topaz) Kobe, 11/3.

...FORMALDEHYDE T R America Chemicals 720 bgs (41032 lbs) (Sea Land Pacer) Algeciras, 10/30.

...CHOULI OIL 10 dms (4872 lbs0 (Ever Grand) Singapore, 10/27.

...LUNG F C Gerlach 651 ctn (37031 lbs) (Dusseldorf Express) Greenock, 10/29.

...TAERYTHRITOL Degussa 881 bgs (44438 lbs) (Dusseldorf Express) Bremerhaven, 10/29.

...chem 700 bgs (39930 lbs) (Imperial) Valparaiso, 10/31.

...ETHYLENE HEXAMINE MDSI 1 dms (121 lbs) (Aldebaran) Antwerp, 11/4.

...PER Martinez Tropical Products 30 bgs (0 lbs0 (San Pedro) Haina, 10/24.

...I & C Dominguez 52 bgs (0 lbs0 (San Pedro) Haina, 10/24.

...Cargo 5 ctn (0 lbs) (Zhuang He) Hong Kong, 10/19.

...60 brl (0 lbs) (American Ohio) Rotterdam, 10/25.

...Imports 35 brl (0 lbs) (American Ohio) Rotterdam, 10/25.

...Trdg 675 dms (232588 lbs0 (Sea Land Pacer) Algeciras, 10/30.

...Sales 230 brl (88185 lbs) (American Ohio) Rotterdam, 10/25.

...TITGRAIN OIL Charabot 18 dms (7937 lbs) (Savannah) Montevideo, 11/1.

...SPHORIC ACID Nitron Chemical 1 bks (2215945 lbs0 (... Emerald) Rottedam, 11/4.

...NEEDLE OIL Centflor Mfg 6 dms (2553 lbs) (American Oklahoma) Hong Kong, 10/29.

...ANOYL CHLORIDE SNPE 40 dms (0 lbs) (Independence) Marseille, 10/20.

...ACRYLAMIDE Mitsubishi Chemical Ind 600 bgs (...56 lbs) (Zhuang He) Kobe, 10/19.

...BUTENE B F Performance Polymers 78 dms (181641 lbs) (Independence) Marseille, 10/20.

...ETHYLENEIMINE Sakai Trdg 20 dms (9788 lbs) (Oriental Freedom) Yokohama, 10/28

POLYMETHYLENE POLYMETHYLISOCIANATE Montedison 66 dms (39432 lbs) (Sea Land Express) Rotterdam, 10/24.

POLYPROPYLENE RESIN Marubeni America 800 bgs (44312 lbs) (Ever Grand) Tokyo, 10/27.

Marubeni America 800 bgs (44312 lbs) (Ever Level) Tokyo, 10/28.

POLYTETRAFLUOROETHYLENE Sumitomo of America 420 dms (13051 lbs) (Oriental Freedom) Kobe, 10/28

POLYTETRAHYDROFURAN 1 tnk (39683 lbs) (Aldebaran) Bremon, 11/4.

POLYURETHANE Pat Products 680 sks (3909 lbs) (Atlantic Cartier) Liverpool, 10/30.

POLYVINYL ALCOHOL Marubeni America 80 pkg (85010 lbs) (Neptune Garnet) Kobe, 10/23.

Mitsubishi Intl 50 bgs (2304 lbs0 (Oriental Freedom) Kobe, 10/28.

Perry Chemical 770 bgs (38847 lbs) (Ever Grand) Keelung, 10/27.

Trans Senko 750 bgs (38029 lbs) (Zhuang He) Kobe, 10/19.

POLYVINYL CHLORIDE Tarkett 759 bgs (43431 lbs) (Ever Gentle) Hamburg, 10/27.

POTASSIUM BICARBONATE Kay Fries 126 dms (40207 lbs) (Stefan Starzynski) Bremerhaven, 10/28.

POTASSIUM CARBONATE All Cargo 100 ctn (0 lbs) (Zhuang He) Hong Kong, 10/19.

Dah Chong Hong Trdg 75 ctn (0 lbs) (Zhuang He) Hong Kong, 10/19.

POTASSIUM CHLORATE T R America Chemicals 320 dms (94534 lbs) (Sea Land Express) Rotterdam, 10/24.

160 mix (47267 lbs) (Sea Land Express) Rotterdam, 10/24.

POTASSIUM DICHROMATE American Chrome & Chemicals 400 bgs (45309 lbs) (Sea Land Express) Rotterdam, 10/24.

POTASSIUM HYDROXIDE Autotype 10 pbx (5575 lbs0 (Atlantic Cartier) Liverpool, 10/30.

POTASSIUM NITRATE I M Rodgers 40 dms (4647 lbs) (Zeus) Rio D Janeiro, 10/24.

POTASSIUM PENCILLIN G Beecham 246 ctn (13614 lbs) (American Lynx) Bremerhaven, 10/30.

472 mix (54529 lbs) (American Lynx) Bremerhaven, 10/30.

PSYLLIUM SEED HUSK Lafayette Pharmacal 960 bgs (93124 lbs0 (American Oklahoma) Khor Fakkan, 10/29.

R-T

ROSEWOOD OIL Berje 6 dms (2540 lbs) (Bislig Bay) Rio D Janeiro, 10/17

7 dms (2608 lbs) (Bislig Bay) Rio D Janeiro, 10/17.

SAFFLOWER Herbarium 35 bgs (1620 lbs) (Neptune Garnet) Yokohama, 10/23.

Max Van Pels 29 bgs (0 lbs0 (Neptune Garnet) Yokohama, 10/23

Max Van Pels 7 bgs (0 lbs) (Neptune Garnet) Yokohama, 10/23.

SAFFRON All Cargo 40 bgs (0 lbs) (Zhuang He) Hong Kong, 10/19.

SALT Intl Salt 1 bks (23809680 lbs) (Maya No 3) Bonaire, 10/29

SASSAFRAS OIL 40 dms (20723 lbs0 (Zeus) Santos, 10/24.

SESAME SEED Great Lakes Intl Trdg 880 bgs (44440 lbs) (Saint Louis) Haina, 10/18.

Louis Furth 920 bgs (45999 lbs) (Saint Louis) Haina, 10/18.

Pacific Agro Ind 960 bgs (46473 lbs0 (San Pedro) Haina, 10/24.

Suchar 920 bgs (46000 lbs) (San Pedro) Haina, 10/24.

SODIUM ALGINATE Protan Scottia Marine 800 bgs (41411 lbs) (Atlantic Cartier) Bremerhaven, 10/30.

SODIUM BICARBONATE Witusa Products 1586 bgs (8167 lbs) (Ever Gentle) Antwerp, 10/27.

Vitusa 1774 bgs (161065 lbs) (Ever Gifted) Antwerp, 10/16.

Witusa Products 395 bgs (40360 lbs) (Ever Gentle) Antwerp, 10/27.

SODIUM CARBOXYMETHYL CELLULOSE Robaco Chemicals 60 mix (46297 lbs) (Ever Gifted) Antwerp, 10/15.

SODIUM CYANIDE UTC 252 dms (36389 lbs) (Italica) Genoa, 10/24.

T-Z

TANTALUM INGOTS Ariel Maritime Group 6 dms (2773 lbs) (Dusseldorf Express) Antwerp, 10/29.

TARRAGON LEAVES Schaldt Bruno 500 ctn (7716 lbs) (Aldebaran) Antwerp, 11/4.

TETRACYCLINE HCL Pan American Container 156 dms (1213 lbs) (American Lynx) Rotterdam, 10/30.

TETRAHYDROFURAN Kogel Overseas 248 mix (44295 lbs) (Dusseldorf Express) Antwerp, 10/29.

TITANIUM DIOXIDE Durr Marketing 2640 bgs (132410 lbs) (Sea Land Pacer) Algeciras, 10/30.

Leachaco 3040 bgs (157867 lbs) (Dusseldorf Express) Antwerp, 10/29.

Lukens Chemical 880 bgs (44137 lbs) (Sea Land Pacer) Algeciras, 10/30.

N L Ind 1000 bgs (165080 lbs) (Ever Gifted) Antwerp, 10/15.

SCM 4400 bgs (227284 lbs) (Sea Land Express) Rotterdam, 10/24.

Superior Materials 2400 bgs (120372 lbs) (Sea Land Pacer) Algeciras, 10/30.

Kemira 1520 bgs (78755 lbs) (Stefan Starzynski) Bremerhaven, 10/28.

Huxley Raw Material 760 bgs (39590 lbs) (Stefan Stazynski) Bremerhaven, 10/28.

N L Ind 800 pkg (165080 lbs) (Ever Gifted) Hamburg, 10/15.

N L Ind 4000 bgs (207232 lbs) (Ever Gentle) Antwerp, 10/27.

N L Ind 4000 bgs (207455 lbs) (American Lynx) Rottercaxm, 10/30.

N L Ind 1600 bgs (82540 lbs) (Ever Gentle) Antwerp, 10/27.

N L Ind 4500 bgs (231162 lbs) (Ever Gentle) Antwerp, 10/27.

THIAMINE MONONITRATE Centurion Shpg 75 dms (0 lbs) (Neptune Garnet) Hong Kong, 10/23.

Karl Schroff 50 dms (2701 lbs) (Oriental Freedom) Hong Kong, 10/28.

VANILLIN 540 dms (72977 lbs) (Zhuang He) Kobe, 10/19.

VINYL ACETATE Mazzuchelli 51 skd (74416 lbs) (Italica) Genoa, 10/24.

VITAMIN D_3 Panalpina 60 dms (0 lbs) (Sea Land Express) Rotterdam, 10/24.

VITAMIN B_6 Daniel F Young 20 dms (1279 lbs0 (Zhuang He) Kobe, 10/19.

VITAMINS Danochemo 462 dms (42765 lbs) (Bakkafoss) Rotterdam, 10/25.

WOOL GREASE Joseph H Lowenstein & Sons 74 dms (33499 lbs) (Aldebaran) Felixstowe, 11/4.

XANTHAN GUM BDF Beiersdorf 3 dms (185 lbs) (Sea Land Express) Bremerhaven, 10/24.

ZINC CHLORIDE 800 bgs (45732 lbs) (Elvira Oria) Rotterdam, 10/24.

ZIRCONIUM CARBONATE F B Vandegrift 180 dms (41667 lbs) (California Star) Felixstowe, 10/25.

ME 180 dms (41667 lbs) (Aldebaran) Felistowe, 11/4.

CHEMICAL PROFILE

Continued from Page 54

to return to saltcake for pulping purposes.

WEAKNESS

Laundry detergent makers decreased their sodium sulfate requirement almost 10 percent in 1986, and another 5-10 percent decline is expected for next year. Sodium sulfate is also losing ground in the dishwasher detergent market as soapmakers introduce liquid products there.

OUTLOOK

Losses in the detergent market will slow after 1987 as liquid detergent popularity peaks and reformulation to denser products has, for the most part, run its course. Even if chloralkali and sulfur prices strengthen next year, a return to saltcake instead of caustic soda and emulsified sulfur in Kraft pulping will be slow in coming.

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ADVERTISERS' INDEX

CHEMICAL PROFILE

SODIUM SULFATE

December 1, 1986

SUPPLY

PRODUCER	CAPACITY*
BASF, Lowland, Tenn. (R)	38
Avtex, Front Royal, Va. (R)	65
Climax, Hobbes, N.M. (C)	50
Climax, Grantsville, Utah (C)	65
Courtaulds, Le Moyne, Ala. (R)	50
Great Salt Lake, Ogden, Utah (N)	40
J.M. Huber, Etowah, Tenn. (P)	30
Kerr-McGee, Westend, Calif. (N)	235
Koppers, Petrolia, Pa. (K)	33
Lithium Corporation, Bessemer City, N.C. (L)	36
Occidental, Castle Hayne, N.C. (S)	120
Ozark-Mahoning, Brownfield, Tex. (N)	70
Ozark-Mahoning, Seagraves, Tex. (N)	155
Others**	70
Total	1,077

*Thousands of short tons per year of sodium sulfate or lower grade saltcake, 100 percent basis. N, natural; R, rayon; C, Cannon; S, sodium bichromate; R, resorcinol; L, lithium carbonate; P, silica pigment. Allied closed its 60,000-ton-per-year Baltimore, Md., plant in mid-1985. BASF bought American Enka in December 1985. Climax's Grantsville plant currently produces under 10,000 tons per year of sodium sulfate; most capacity has been dedicated to potassium sulfate since late 1984. Courtaulds expanded its capacity from 25,000 tons per year in early 1986, upgrading production to higher purity sodium sulfate. Foote Mineral idled its 16,000-ton-per-year Bessemer City, N.C., plant in November, 1986. J.M. Huber plans to come on stream with a 10,000 to 15,000 tons per year silica pigment byproduct plant in Havre de Grace, Md., in early 1987. Occidental acquired Diamond-Shamrock's Chemicals in August, 1986. Ozark-Mahoning expanded its Seagraves facility from 108,000 tons per year in November, 1985.

**Seven companies with byproduct sodium sulfate capacities of less than 25,000 tons per year. Profile excludes spent caustic wash and low-grade recovered blends. Profile last published April 1, 1984; this revision December 1, 1986.

DEMAND

1985: 930,000 tons; 1986: 850,000 tons; 1990: 850,000 tons.

GROWTH

Historical (1976-1985): Minus 4.1 percent per year; future: 0 percent per year.

PRICE

Historical (1952-1986): High, $114 per ton, sodium sulfate, bulk shipments, f.o.b. plant; low, $17 per ton, salt cake, same basis. Current: $55 per ton, saltcake, E., same basis; $96 to $114 per ton, sodium sulfate, same basis.

USES

Detergent industry, 45 percent; Kraft pulping, 25 percent; glass, 5 percent; exports, 15 percent; miscellaneous, 10 percent.

STRENGTH

Production of higher valued sodium sulfate is increasing as plants upgrade recovery processes. Increasing caustic soda prices may convince papermakers

Continued on Page 53

PLATFORM

Advanced Materials: The Entry Fee

The following remarks are excerpted from an address by Edward L. Hennessy, president and chief executive officer of Allied-Signal, Inc. before the annual meeting of the Council for Chemical Research in Chicago, Ill.

While advanced materials are where everybody wants to be right now, investing in these technologies poses big challenges. Developing or acquiring a materials business will cost you plenty — we've looked at composites businesses that were selling for 70 times earnings. And, suppose you can afford this kind of investment — where do you make it? Obviously, there are many materials and hundreds — if not thousands — of potential applications to evaluate.

You can't make your decision by looking at what's doing well in today's market — because most of the materials technologies have still not begun to realize their full business potential.

So what do you do? There aren't any easy answers. But we think the best approach is for companies to hedge their bets by doing development work in as many different high-potential materials technologies as they can. Our engineered materials sector has emerging businesses in super-strength fibers, amorphous metals and biotechnology — as well as development programs in composites, ceramics, advanced films and plastics, catalysts and membranes. This future-oriented effort is funded by a sector R&D budget that totals $155 million — and it also receives extensive support from our $50 million corporate technology program in composites, ceramics, polymers and other advanced materials. In addition, we're looking for some acquisitions that will increase our involvement in these materials areas.

Once you've committed yourself to various technologies, how do you maximize the chances of developing them into products you can commercialize? One thing you must do, of course, is build your new development programs on your company's traditional strengths whenever possible.

...Another way to maximize the effectiveness of your development programs in materials is to make sure they get support from related technology activities throughout your company. At Allied-Signal our engineered materials people draw on the expertise of our aerospace and automotive people in developing materials for airplanes and cars.

...Collaboration among different operations is important. But so is collaboration among your different technical disciplines. To design a new material, you need more knowledge than can be found in any one field of specialization. You must have chemists who know what molecular changes are needed — physicists who can measure and understand bulk properties — and engineers who can figure out how to make new materials in a cost-effective way.

...And success comes even faster when this intensified human effort is supported by powerful computer modeling techniques. Recently our large Norplex operation followed this route in designing a new polymer system for circuit board laminates.

...A laminate based on the system that was selected will be ready for commercialization next year. Thanks to the computer, development of the new laminate is going to take just three years — which is unusually fast for such a product.

...In working to develop advanced materials, we need to make the best use of computers and get the most out of all our internal technology resources. But we should also take advantage of outside research programs offered by universities, government and industry groups.

...Sometimes the outside support needed to help us build a materials business is not research, but fully developed technology or marketing expertise. One way to get involved in a number of technologies in an area where you have a limited budget is by supplementing your internal development effort with less costly licensing or joint venture arrangements.

...We have a licensing agreement with the Japanese firm Unitika that will make us the first US producer of biaxial nylon film for food packaging. And we will be forming a 15 joint venture with Kanegafuchi of Japan to produce other high-performance films for flexible printed circuit boards.

...Today I see signs that the chemical industry is moving toward a major self-renewal, toward a time of accelerating innovation, increasing business development and rapidly growing sales and profits. I believe this will be a renewal based not on chemicals but on the advanced materials I've been discussing.

Our scientists have now learned enough about molecular properties — and collected enough of a data base — so that they are able to engineer advanced materials with the performance characteristics we want. These technical people are also well versed in the complex techniques used to process new materials — techniques like rapid solidification for amorphous metals, or pultrusion for composites. Finally, technical and business people alike have shown they can adjust to the industry's critical shift in emphasis beyond high-efficiency manufacturing to development of customer-specific applications.

JOBS & PEOPLE

D. Hans Amoldy, who has been appointed senior vice-president of Akzo Chemie America. He will direct the operations of Noury chemicals and will also be responsible for metal carboxylates.

D. Dill

T. Merrfield

Ralston Purina Names Two in Polymer Division

Ralston Purina Company has appointed Dr. Dale R. Dill director of research and development in its Polymer Division and Thomas B. Merrifield manager of sales service and R&D.

Mr. Dill will be responsible for sales service, field technical service, application development and product quality in the Polymer Division.

Mr. Merrifield will be responsible for supervision of laboratory fulfillment of technical service requests and research projects using soy-based products for the paper coatings industry.

Frank B. DiBerardino, who has been named vice-president of business development at Catalytica, producer of advanced catalytic technologies. He will direct the firm's commercialization programs.

Domtar Appoints Two In its Salt Division

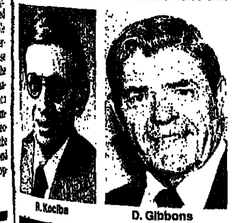
Domtar Industries Inc. has named Lane Lighthart and Donald Jordan district sales managers for the West and East, respectively, in its "Sifto" Salt Division.

Mr. Lighthart joined the division in 1980 and was most recently territory supervisor, based in Dubuque, Iowa.

Mr. Jordon joined the division in 1974 and was previously territory supervisor, working out of the division's Cincinnati, Ohio, office.

L. Lighthart

D. Jordan



R.Kociba

D. Gibbons

R. Hirsch

R. Nelson

L. Peters

J. Alderman

C. Maxwell

G. Ramseier

KICHARD J. KOCIBA has been named a research scientist in the mammalian and environmental toxicology research laboratory of the Chemical Company's health and environmental sciences department... DAVID F. GIBBONS has been appointed Northeast district manager for the Dyes & Chemicals Division of Crompton & Knowles Corporation... ROBERT W. HIRSCH has been named vice-president of sales at Chemfix Technologies Inc.

RONALD R. NELSON has been appointed senior sales representative in the Industrial Division of Merck & Co.,'s Kelco unit... DOUGLAS H. PETERS has been named executive director of the Polyurethane Foam Association... DR. JOHN F. ALDERMAN has been appointed president and chief executive officer of Immunetech Pharmaceuticals.

EDWARD INTERESS has been named manager of Arthur D. Little Inc.,'s chemical and metallurgical engineering practice... DONALD W. TRACY has joined First Mississippi Corporation as manager of corporate loss control... JOHN J. FOSTER has been appointed Gulf Coast regional sales manager for Chemfix Technologies Inc.

GREGORY W. HUNT has been named senior sales representative for the Unocal Chemicals Division of Unocal Corporation, NANCY M. ELLIOTT has been appointed customer service manager for the division's Twinsburg, Ohio, office, and MARK N. ORVICK has been named account manager in the St. Paul, Minn., office.

GERRY DZIEDZINA has been appointed account manager for optical fiber coatings at DeSoto Inc.... DOUGLAS L. WHITE has been named director of proposals in Rust International Corporation's Birmingham, Ala., headquarters office... GARRY C. DUNN has been appointed president of Hercules Europe, succeeding Gordon L. Allan, who is taking early retirement.

MALCOLM R. LLOYD has been named president of Alberto-Culver's international group... P. DOUGLAS MCAULEY has been appointed corporate vice-president for US consumer products and RALPH SUTHERLAND has been named vice-president of the company's US Toiletries Division.

STANLEY P. DUDEK JR. has been named marketing manager for the inks, coatings and floor finishes industries at Allied-Signal Inc.,'s "A-C" polyethylene business... WOLFGANG C. BERNDT has been elected a vice-president at Procter & Gamble Company.

MEETINGS CALENDAR

December 1, 1986

THIS WEEK

NATIONAL ASSOCIATION OF CHEMICAL DISTRIBUTORS, 15th annual meeting, Ritz-Carlton-Naples Hotel, Naples, Fla., December 2-6.

THIS MONTH

CHEMICAL SPECIALTIES MANUFACTURERS ASSOCIATION, 73rd annual meeting, Marriott's Harbor Beach Resort, Fort Lauderdale, Fla., December 7-11.

SALES ASSOCIATION OF THE CHEMICAL INDUSTRY, annual Christmas party, New York Hilton Hotel, New York, December 18; education committee, seminar, "The Psychology of Selling," Treadway Inn, Saddle Brook, N.J., December 18

SYNTHETIC ORGANIC CHEMICAL MANUFACTURERS ASSOCIATION, 65th annual dinner, Windows on the World, New York, N.Y., December 11.

JANUARY

SOAP AND DETERGENT ASSOCIATION, 60th Annual Meeting and Industry Convention, Boca Raton Hotel and Club, Boca Raton, Fla., January 29-February 1, 1987.

LATER ON

AMERICAN INSTITUTE OF CHEMICAL ENGINEERS, center for chemical process safety, international conference on chemical safety issues, Omni Shoreham Hotel, Washington, D.C., February 3-5.

ASSOCIATION OF OFFICIAL ANALYTICAL CHEMISTS, 12th annual Spring workshop and exhibition, Skyline Ottawa Hotel, Ottawa, Ontario, Canada, April 27-30.

CHEMICAL GROUP OF NATIONAL ASSOCIATION OF PURCHASING MANAGERS, mid-Winter conference, "Purchasing — Opportunity in a Changing World," Baton Rouge Hilton Hotel, Baton Rouge, La., February 18-20.

CHEMICAL MARKETING RESEARCH ASSOCIATION, Houston Meeting; "The US Chemical Industry-Responding to Change," Westin Galleria Hotel, Houston, Tex., February 4-5, 1987.

CHEMICAL SPECIALTIES MANUFACTURERS ASSOCIATION, 73rd mid-year meeting, Chicago Marriott Hotel, Chicago, Ill., April 26-29.

CHINACHEM '87, International exhibition on chemical and petrochemical industries, China International Exhibition Center, Beijing, China, April 3-9.

CHLORINE INSTITUTE, Winter meeting, Mayflower Hotel, Washington, D.C., March 15-19.

DRUG, CHEMICAL & ALLIED TRADES ASSOCIATION, 61st annual dinner, Waldorf-Astoria Hotel, New York, March 19; Spring luncheon, Sheraton Centre Hotel, New York, N.Y., June 11.

FERTILIZER INSTITUTE, 1987 annual meeting, Marriott Orlando World Center, Orlando, Fla., February 1-3.

FIRE RETARDANT CHEMICALS ASSOCIATION, International conference on flame retardancy and fire safety, Sheraton New Orleans Hotel, New Orleans, La., March 22-25.

INSTITUTE OF GAS TECHNOLOGY, 11th annual symposium on energy from biomass and wastes, Hotel Royal Plaza, Walt Disney World Village, Buena Vista, Fla., February 2-6.

INTER-SOCIETY COLOR COUNCIL, scientific conference, Williamsburg Lodge, Williamsburg, Va., February 8-11.

NATIONAL PETROLEUM REFINERS ASSOCIATION, 85th annual meeting, Convention Center, San Antonio, Tex., March 29-31; 12th international petrochemical conference, Convention Center, San Antonio, Tex., April 5-7.

POLYURETHANE MANUFACTURERS ASSOCIATION, Spring meeting, commercial development of new castable systems, Fairmont Hotel, Dallas, Tex., April 26-29.

SOCIETY OF THE PLASTICS INDUSTRY, 42nd annual conference of the reinforced plastics and composites institute, Cincinnati Convention & Exhibition Center, Cincinnati, Ohio, February 2-6.

THE FERTILIZER INSTITUTE, 1987 Annual Meeting Marriott Orlando World Center, Orlando, Fla., February 1-3, 1987.

BUSINESS BRIEFS

ZYTECH INC., Lansdale, Pa., says it has received two US patents for what it describes as a "major breakthrough" in advanced low-pressure liquid filling systems technology. One patent covers a liquid filling system while a second covers an in-place steam sterilization technique that requires no dissassembly of the filling system, according to the firm.

BKO PERFORMANCE Products Inc., Union Carbide Corporation's engineering plastics group, has moved into new offices in Ridgefield, Conn. The business was previously located at Carbide's headquarters in Danbury, Conn. The business includes such products as "Udel" polysulfone, "Radel" polyarylsulfone, "Ardel" polyarylate and "Mindel" polyketone and "Mindel"

APPLIED SEPARATIONS INC., Bethlehem, Pa., has moved to a new headquarters site with larger laboratory facilities at the Ben Franklin Technology Center in Bethlehem. Applied Separations says the move will enable the company to increase its technical capabilities and applications support.

BIOCOMMERCE ABSTRACTS, a new database, is available through Dialog Information Services Inc. of San Francisco, Calif. The data-base contains over 20,000 abstracts indexing more than 70,000 biotechnology business news reports since 1981. It is updated twice monthly with references from major newsletters, business magazines, trade journals and newspapers published worldwide.

CHURCH & DWIGHT Company, Princeton, N.J., has sold patents and technology related to its oven cleaning business to American Home Products Corporation. Purchase price was not given, but the transaction is expected to add about 7 cents per share to Church & Dwight's third-quarter earnings. Following the sale, Church & Dwight discontinued its "Arm & Hammer" oven-cleaner products, which had been contributing about $3 million in annual sales revenues. The discontinuance will have no significant impact on operating profits, the company said.

CIBA-GEIGY's electronic chemicals group has introduced a new line of high-purity epoxy resins, hardeners and auxiliary products for various applications in the electronics industry. The "Araltronic" 5000 series consists of epoxy, epoxy phenol novolac and other multifunctional resins, as well bas hardeners and diluents.

JORAN CHEMICAL Company, Folcroft, Pa., has introduced a new bisquaternary, called "Jordaquat" Dimer AD, which bridges the gap between mono-functional and polymeric ationic agents, according to the company. Jordan claims the product provides superior results for formulators of conditioning shampoos and body products.

SMITHKLINE CORPORATION, health care concern based in Philadelphia, has placed its shares on the London Stock Exchange. SmithKline listed its shares on the Paris exchange last Spring and earlier this month its shares began trading on the Tokyo exchange. A spokesman for SmithKline notes that the company employs 1,700 in the UK, where it has sales in excess of $100 million and operates large research and development centers in Welwyn and Tonbridge.